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Utah State Agricultural College

BULLETIN



General Catalogue

1929-30



FORTIETH YEAR

With List of Students for 1928-1929

Published by the College
JULY, 1929

LOGAN, UTAH

CALENDAR

1929							1930														1931						
JULY							JANUARY							JULY							JANUARY						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
7	8	9	10	11	12	13	5	6	7	8	9	10	11	6	7	8	9	10	11	12	4	5	6	7	8	9	10
14	15	16	17	18	19	20	12	13	14	15	16	17	18	13	14	15	16	17	18	19	11	12	13	14	15	16	17
21	22	23	24	25	26	27	19	20	21	22	23	24	25	20	21	22	23	24	25	26	18	19	20	21	22	23	24
28	29	30	31				26	27	28	29	30	31		27	28	29	30	31			25	26	27	28	29	30	31
AUGUST							FEBRUARY							AUGUST							FEBRUARY						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
4	5	6	7	8	9	10	2	3	4	5	6	7	8	3	4	5	6	7	8	9	1	2	3	4	5	6	7
11	12	13	14	15	16	17	9	10	11	12	13	14	15	10	11	12	13	14	15	16	15	16	17	18	19	20	21
18	19	20	21	22	23	24	16	17	18	19	20	21	22	17	18	19	20	21	22	23	22	23	24	25	26	27	28
25	26	27	28	29	30	31	23	24	25	26	27	28		24	25	26	27	28	29	30							
SEPTEMBER							MARCH							SEPTEMBER							MARCH						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7	2	3	4	5	6	7	8	7	8	9	10	11	12	13	1	2	3	4	5	6	7
8	9	10	11	12	13	14	9	10	11	12	13	14	15	14	15	16	17	18	19	20	8	9	10	11	12	13	14
15	16	17	18	19	20	21	16	17	18	19	20	21	22	21	22	23	24	25	26	27	15	16	17	18	19	20	21
22	23	24	25	26	27	28	23	24	25	26	27	28	29	28	29	30					22	23	24	25	26	27	28
29	30						30	31													29	30	31				
OCTOBER							APRIL							OCTOBER							APRIL						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
6	7	8	9	10	11	12	6	7	8	9	10	11	12	5	6	7	8	9	10	11	5	6	7	8	9	10	11
13	14	15	16	17	18	19	13	14	15	16	17	18	19	12	13	14	15	16	17	18	12	13	14	15	16	17	18
20	21	22	23	24	25	26	20	21	22	23	24	25	26	19	20	21	22	23	24	25	19	20	21	22	23	24	25
27	28	29	30	31			27	28	29	30				26	27	28	29	30	31		26	27	28	29	30		
NOVEMBER							MAY							NOVEMBER							MAY						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
3	4	5	6	7	8	9	4	5	6	7	8	9	10	2	3	4	5	6	7	8	3	4	5	6	7	8	9
10	11	12	13	14	15	16	11	12	13	14	15	16	17	9	10	11	12	13	14	15	10	11	12	13	14	15	16
17	18	19	20	21	22	23	18	19	20	21	22	23	24	16	17	18	19	20	21	22	17	18	19	20	21	22	23
24	25	26	27	28	29	30	25	26	27	28	29	30	31	23	24	25	26	27	28	29	24	25	26	27	28	29	30
DECEMBER							JUNE							DECEMBER							JUNE						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5	6	7	7	8	9	10	11	12	13
8	9	10	11	12	13	14	8	9	10	11	12	13	14	8	9	10	11	12	13	14	14	15	16	17	18	19	20
15	16	17	18	19	20	21	15	16	17	18	19	20	21	14	15	16	17	18	19	20	21	22	23	24	25	26	27
22	23	24	25	26	27	28	22	23	24	25	26	27	28	21	22	23	24	25	26	27	28	29	30	31			
29	30	31					29	30						29	30	31					29	30	31				

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COLLEGE CALENDAR FOR 1929-30

FALL QUARTER

September 20, Friday.....	Entrance exam's for those who so request. Sp. instr. and ent'mt. for Freshmen.
September 21, Saturday.....	Registration for Freshmen only.
September 23, Monday.....	Registration for Soph's, Jun's & Seniors
September 24, Tuesday.....	Instruction begins.
September 26, Thursday.....	President's Assembly.
October 11th, Friday.....	Columbus Day Assembly
November 7, Thursday.....	Fathers' and Mothers' Day Assembly.
November 11, Monday.....	Armistice Day Assembly (half holiday).
November 26, Tuesday.....	Thanksgiving Assembly
November 27, Wednesday (noon).....	Thanksgiving Recess begins.
December 1, Sunday.....	Thanksgiving Recess ends.
December 13, Friday.....	Fall Quarter closes. Athletic Banquet

WINTER QUARTER

December 14, Saturday.....	Registration for Winter Quarter.
December 16, Monday.....	Instruction begins.
December 18, Wednesday.....	Christmas Assembly.
December 21, Saturday.....	Christmas Recess begins.
January 6, Monday.....	Instruction resumes.
January 8, Wednesday.....	New Year Assembly.
January 16, Thursday.....	Utah Extension Service Assembly.
February 12, Wednesday.....	Lincoln's Birthday (holiday).
February 19, Wednesday.....	Lincoln, Washington Assembly.
March 7, Friday.....	Founders' Day Assembly (half holiday).
March 14, Friday.....	Winter Quarter ends.

SPRING QUARTER

March 15, Saturday.....	Registration for Spring Quarter.
March 17, Monday.....	Instruction begins.
March 20, Thursday.....	Easter Assembly.
May 8, Thursday.....	Mothers' Day Assembly.
May 16, Friday.....	Conferring Scholarships & other awards
May 21, Wednesday.....	Senior Assembly.
May 23, Friday.....	Scholars' Banquet.
May 29, Thursday.....	Spring Quarter ends. Annual Alumni business meeting and social.
May 30, Friday.....	Memorial Day, (holiday).
May 31, Saturday.....	Commencement, Alumni Banquet & Ball.
June 1, Sunday.....	Baccalaureate Sermon.

SUMMER SESSION

June 9, Monday.....	Summer Session begins.
July 18, Friday.....	Summer Session ends.

BOARD OF TRUSTEES

A. W. IVINS.....	Salt Lake City
C. G. ADNEY.....	Corinne
MRS. LEE CHAS. MILLER.....	Salt Lake City
WESTON VERNON.....	Logan
FREDERICK P. CHAMP.....	Logan
JOHN E. GRIFFIN.....	Newton
FRANK B. STEPHENS.....	Salt Lake City
MRS. BURTON W. MUSSER.....	Salt Lake City
WALTER K. GRANGER.....	Cedar City
ROY BULLEN.....	Salt Lake City
LORENZO N. STOHL.....	Salt Lake City
DAVID WANGSGARD.....	Ogden
MILTON H. WELLING, Secretary of State, (ex-officio).....	Salt Lake City

OFFICERS OF BOARD

A. W. IVINS.....	President
C. G. ADNEY.....	Vice-President
RUSSEL E. BERNTSON.....	Secretary-Treasurer

STANDING COMMITTEES OF THE BOARD OF TRUSTEES

Executive Committee—A. W. Ivins, C. G. Adney, John E. Griffin, Mrs. Lee Chas. Miller, Weston Vernon.

Committee on Agriculture—C. G. Adney, Walter K. Granger, John E. Griffin, Mrs. Lee Chas. Miller.

Committee on Mechanic Arts—John E. Griffin, C. G. Adney, David Wangsgard.

Committee on Engineering—Roy Bullen, Weston Vernon, David Wangsgard.

Committee on Home Economics— Mrs. Burton W. Musser, Lorenzo N. Stohl, Frederick P. Champ.

Committee on Commerce—Frederick P. Champ, Lorenzo N. Stohl, Roy Bullen.

Committee on Experiment Station—Lorenzo N. Stohl, Mrs. Burton W. Musser, Walter K. Granger.

Committee on Extension Division—Frank B. Stephens, Mrs. Lee Chas. Miller, C. G. Adney.

Committee on Faculty and Course of Study—Weston Vernon, Frederick P. Champ, John E. Griffin.

Committee on Live Stock— C. G. Adney, John E. Griffin, Walter K. Granger, Mrs. Lee Chas. Miller.

Committee on Buildings and Grounds—Frederick P. Champ, Weston Vernon, John E. Griffin.

Committee on Power, Heat and Light—Roy Bullen, Lorenzo N. Stohl, Milton H. Welling.

Committee on Branch Agricultural College—Walter K. Granger, Mrs. Lee Chas. Miller, Milton H. Welling, Mrs. Burton W. Musser.

Committee on Legislation and Finance—Mrs. Lee Chas. Miller, Roy Bullen, Frederick P. Champ, Mrs. Burton W. Musser, Frank B. Stephens.

OFFICERS OF ADMINISTRATION AND INSTRUCTION*

THE COLLEGE FACULTY

(Arranged in groups in the order of seniority of appointment)

ELMER GEORGE PETERSON

President

B. S., Utah State Agricultural College, 1904; Graduate Student, University of Chicago, 1906; A. M., Cornell University, 1909; Ph. D., 1911. Assistant Professor of Zoology and Entomology, Utah State Agricultural College, 1906-08; Instructor and Assistant Professor of Bacteriology, Cornell University, 1909-10; Professor of Bacteriology, Oregon Agricultural College, Bacteriologist, Oregon Experiment Station, 1910-11; Professor of Bacteriology, Utah State Agricultural College, 1911-12; Director of Extension Division, 1912-16; President, 1916—.

WILLIAM PETERSON

Director of Extension Division, Professor of Geology

B. S., Utah State Agricultural College, 1899. Instructor in Horticulture and Mathematics, Utah State Agricultural College, 1899-1901; Student University of Chicago, 1901-02, Summers of 1902-03-04. Assistant Professor of Geology and Mineralogy, Utah State Agricultural College, 1904-06; Professor of Geology and Physics, 1906-08; Geology Field Work, 1908-10; Professor of Geology, Utah State Agricultural College, 1910; United States Geological Survey Field Work, Summers 1912-13; Member of State Road Commission, 1914-16; Utah State Geologist, 1917-21; Director, Utah State Agricultural College Experiment Station, 1921-1928; Director of Extension Division, 1924—.

HYRUM JOHN FREDERICK

Professor of Veterinary Science

D. V. M., Iowa State College, 1905. Graduate Study in Europe, 1924-25. Assistant Professor of Veterinary Science, Utah State Agricultural College, 1905-06; Professor, 1906—.

FRANK RUSSEL ARNOLD

Professor of Modern Languages

A. B., Bowdoin College, 1893, M. A., 1902. Graduate Student, Harvard University, Summers of 1893, 94, 99; University of Paris, 1895-96; University of Bordeaux, 1896-97; University of Goettingen, 1897-98; University of Chicago, Summers of 1902-03-04. Instructor, University of Chicago, Summer of 1905; Assistant Professor of Modern Languages, Utah State Agricultural College, 1904-06; Professor of Modern Languages, 1906—.

*The College Council consists of the President and all members of the faculty with the rank of professor, associate professor, or assistant professor.

JOHN THOMAS CAINE

Auditor

B. S., Utah State Agricultural College, 1894; M. S. A., (Honorary Degree), 1915. Student, Cornell University, 1876; Superintendent, Cache County Schools, Superintendent Logan City Schools, Instructor in English, Utah State Agricultural College, 1890-1907; Registrar, 1903-12; Auditor, 1912—.

FRANKLIN LORENZO WEST

Dean of the Faculty, Professor of Physics

B. S., Utah State Agricultural College, 1904; Leland Stanford University, 1904-05; Ph. D., University of Chicago, 1911. Professor of Physics, Brigham Young University, 1905-06; Professor of Chemistry, Utah State Agricultural College, 1907-08; Fellow, University of Chicago, 1910-11; Professor of Physics, Utah State Agricultural College, 1908; Director of School of General Science, 1913-21; Dean of the Faculty, 1921—. Registrar, 1927—.

JOSEPH EAMES GREAVES

Professor of Bacteriology and Bio-Chemistry

B. S., Utah State Agricultural College, 1904; M. S., University of Illinois, 1907; Ph. D., University of California, 1911. Instructor in Chemistry, Utah State Agricultural College, 1907-08; Assistant Professor, 1908-10; Fellow, University of California, 1910-11; Associate Professor of Physiological Chemistry, Utah State Agricultural College, 1911-13; Professor of Bacteriology and Physiological Chemistry, 1913-27; Professor of Public Health and Bacteriology, 1927-29; Professor of Bacteriology and Bio-Chemistry, 1929—.

CALVIN FLETCHER

Professor of Art

B. Pd., Brigham Young University, 1905. Student at Pratt Institute, 1906-07; Student at Columbia University, 1912; Student at Central School of Arts and Crafts, London, England, 1912-13; Student of M. Biloul and of Academy Colorossi, Paris, France, 1913; Student at Chicago Art Institute and Art Craft Institute, 1913-14. Superintendent of Art, Utah County Public Schools, 1903-05; Assistant Professor of Art, Brigham Young University, 1905; Assistant Professor of Art, Utah State Agricultural College, 1907-12; Associate Professor, 1912-13; Professor, 1913—; Vice-president, National Vocational Art and Industrial Federation, 1913-14; Director, Utah Art Institute, 1918-20.

RAY BENEDICT WEST

Dean of the School of Engineering, Professor of Engineering

B. S., Utah State Agricultural College, 1904; C. E., Cornell University, 1906; Engineer, Oregon Short Line Railroad, 1906-07; Graduate Student,

University of California, 1928-29. In charge of Engineering Department, Brigham Young College, 1907-08; Division Engineer, Sumpter Valley Railroad, 1908-09; Consulting Engineer, Portland, Oregon, 1909-12; Professor of Agricultural Engineering, Utah State Agricultural College, 1913—, Dean of the Schools of Agricultural Engineering and Mechanic Arts, 1911-27; Dean School of Engineering, 1927—.

JAMES HENRY LINFORD

Director, Summer Session; Superintendent Correspondence-Study Dept.

B. S., Brigham Young College, 1898; D. Did. (honorary degree) Latter-day Saints Board of Education, 1913. Student at the Hopkins Laboratory of Leland Stanford University, Summer Quarter, 1895-96; Student, University of Chicago, Summer Quarter, 1897; Professor of Zoology and Botany, Brigham Young College, 1892-1913; President, Brigham Young College, 1900-13; Director of the Summer Session and Superintendent of the Correspondence-Study Department, Utah State Agricultural College, 1913—.

ARTHUR HERBERT SAXER

Dean of the Schools of Arts and Science and of Education,

Professor of Mathematics

B. S., Utah State Agricultural College, 1910; M. S., University of California, 1912; Ph. D., 1915; Whiting Research Fellow, 1912-13. Instructor in Physics, Utah State Agricultural College, 1910-11; Professor of Mathematics, 1913; Director, School of Home Economics, 1917-21; Dean, School of Arts and Science, 1921—. Dean, School of Education, 1927—.

NEILS ALVIN PEDERSEN

Professor of English and Speech

Graduate, Utah State Normal College, 1901; A. B., University of Utah, 1906; A. M., Harvard University, 1913; Ph. D., University of California, 1924. Critic Teacher, Utah State Normal College, 1901-03; Instructor in Department of Public Speaking, University of Utah, 1906-07; Instructor in English, Utah State Agricultural College, 1907-08; Assistant Professor, 1908-12; Fellow, Harvard University, 1912-13; Professor of English, Utah State Agricultural College, 1913—.

PARLEY ERASTUS PETERSON

Professor of Accounting

A. B., Brigham Young College, 1907; C. P. A., 1913; Graduate Student, Harvard University, 1909-10; Graduate Student, New York University, Summer Quarter, 1910; Member, American Institute of Accounts, 1923. Instructor, History and Economics, Brigham Young College, 1907-09; Instructor in Accounting, Utah State Agricultural College, 1911-12; Assistant Professor of Accounting, 1912-13; Professor, 1913—; Registrar, 1915-24.

FRANKLIN DAVID DAINES

Professor of Political Science

A. B., Brigham Young College, 1906; A. M., Harvard University, 1913; Graduate Student, University of California, 1922-24. Instructor in Mathematics, Brigham Young College, 1906-08; Instructor in Social Science, Brigham Young College, 1910-11; Assistant Professor of History, Utah State Agricultural College, 1913-17; Professor, 1917-22; Professor of Political Science, 1922—.

JOHANNA MOEN

Professor of Textiles and Clothing

B. S., Utah State Agricultural College, 1920. Student, Technical Schools of Norway, 1904-05 and 1914-15; Student, Columbia University 1908-09, 1915, and graduate work, Summer Session 1922 and year of 1925-26. Professor of Textiles and Clothing, Utah State Agricultural College, 1920—.

REUBEN LORENZO HILL

Professor of Chemistry

B. S., Utah State Agricultural College, 1912; Ph. D., Cornell University, 1915; Fellow, Cornell University, 1913-14. Graduate Assistant in Physiological Chemistry, Cornell University, 1914-15; Instructor in Physiological Chemistry, 1915-16; Physiological Chemist, Bureau of Chemistry, United States Department of Agriculture, 1916; Bio-Chemist, Maryland Agricultural Experiment Station, 1916-18; Commissioned First Lieutenant, Food Division of the Sanitary Corps, United States Army, 1918; Professor of Chemistry, Utah State Agricultural College, 1919—.

GEORGE BALLIF CAINE

Professor of Dairy Husbandry

B. S., Utah State Agricultural College, 1912; A. M., University of Missouri, 1914. Assistant Professor of Animal Husbandry, Utah State Agricultural College, 1914-16; Assistant Professor of Dairy Husbandry, 1916-17; Associate Professor, 1917-20; Professor, 1920—.

ORSON WINSO ISRAELSON

Professor of Irrigation and Drainage

B. S., Utah State Agricultural College, 1912; M. S., University of California, 1914; Ph. D., 1925. Assistant, Division of Irrigation Investigation, U. S. Department of Agriculture, Summers of 1913-14; Instructor, University of California, 1914-16; Assistant Professor of Irrigation and Drainage, Utah State Agricultural College, 1916-17; Associate Professor, 1917-19; Professor, 1919—.

GEORGE STEWART*Professor of Agronomy*

B. S., Utah State Agricultural College, 1913; M. S., Cornell University, 1918; Ph. D., University of Minnesota, 1926. Instructor in Agronomy, Utah State Agricultural College, 1913-16; Assistant Professor of Agronomy, Utah State Agricultural College, 1917-18; Associate Professor, 1918-19; Professor, 1919—.

WILLIAM LAWRENCE WANLASS*Dean, School of Commerce, Professor of Agricultural Economics and Marketing*

A. B., George Washington University, 1915; M. A., 1917; Ph. D., Johns Hopkins University, 1919. Instructor in History, George Washington University, 1916-17; Fellow in Political Science, Johns Hopkins University, 1917-19; Travel and Study in Europe, 1928-29; Professor of Economics, Union College, Schenectady, New York, 1919-20; Dean, School of Commerce and Business Administration, Utah State Agricultural College, 1920—; Professor of Business Administration, 1920-26; Professor of Agricultural Economics and Marketing, 1926—.

HENRY PETERSON*Professor of Psychology*

A. B., Brigham Young University, 1894; Ph. B., University of Chicago, 1905; A. M., Harvard University, 1906; Graduate Student, Harvard University, 1907. Dean, Church Teachers College, Brigham Young University, 1909-11; Superintendent of Box Elder County Schools, 1911-12; Principal Ogden High School, 1912-13; Principal Jordan High School, 1914-17; Superintendent Logan City Schools, 1918-21; Professor of Education and Psychology, Utah State Agricultural College, 1927—.

JOEL EDWARD RICKS*Professor of History*

A. B., University of Utah; A. M., University of Chicago, 1920; Graduate Student University of Chicago, 1928-29. President, Weber Normal College, 1920-22; Professor of History, Utah State Agricultural College, 1922—.

ALICE KEWLEYProfessor of Household Administration, Superintendent, Home Economics Cottage, in Charge of Home Economics Education*

B. S., Utah State Agricultural College, 1910. Instructor in Foods and Sanitation, Nephi High School, 1910-13; Head of Home Economics Department, Granite High School, 1913-1920; Assistant Professor of Education and Psychology, Utah State Agricultural College, 1921-23; Professor of Household Administration, 1923—.

*On leave of absence.

MARTIN JOHN O'BRIEN

Professor of Military Science and Tactics

U. S. M. A., 1915. Major, Coast Artillery Corps, United States Army.

WILLARD GARDNER

Professor of Physics

B. S., Utah State Agricultural College, 1912; M. S., University of California, 1915; Ph. D., 1916. Principal Murdock Academy, 1916-17; Graduate Assistant and Instructor in Physics, University of California, 1913-16; Professor of Physics and Mathematics, Brigham Young College, 1917-18; Associate Professor of Physics, Utah State Agricultural College, 1918-24; Professor, 1924—.

BERT LORIN RICHARDS

Professor of Botany and Plant Pathology

B. S., Utah State Agricultural College, 1913; M. S., 1917; Ph. D., University of Wisconsin, 1919. Instructor, Utah State Agricultural College, 1913-15; Assistant Professor of Botany and Plant Pathology, 1915-17; Student, University of Chicago, Summer Quarter, 1916; Fellow, University of Wisconsin, 1917; Associate Professor of Botany and Plant Pathology, Utah State Agricultural College, 1919-24; Professor, 1924—.

KENNETH COLE IKELER

Dean, School of Agriculture, Professor of Animal Husbandry

M. E., Pennsylvania Normal, 1909; B. S. A., Pennsylvania State College, 1913; M. S. A., Iowa State College, 1914. Livestock Field Agent, United States Department of Agriculture, and North Carolina, Experiment Station, 1915; Associate Professor of Animal Husbandry, Iowa State College, 1916-19; Studied the Agriculture of England and Scotland, Summer of 1917; Remount Service in France, 1918; Professor of Animal Husbandry, Iowa State College, 1919-20; Professor of Animal Husbandry, Utah State Agricultural College, 1925; Dean, School of Agriculture, 1926—.

WILLIAM WILLIAMS HENDERSON

Professor of Zoology and Entomology

A. B., Brigham Young College, 1903; Graduate Student, University of Chicago, 1904; M. A., Cornell University, 1905; Ph. D., University of California, 1924. Professor of Biology, Brigham Young College, 1905-10; Principal Weber Academy, 1910-14; Professor of Zoology and Entomology, Utah State Agricultural College, 1917-20; Utah Experiment Station Entomologist, 1917-20; Member Utah State Crops and Pests Commission, 1917-21; President, Brigham Young College, 1920-26; Professor of Zoology and Entomology, Utah Agricultural College, 1926—.

HERBERT J. PACK

Professor of Entomology

B. S., Utah State Agricultural College, 1913; M. S., 1923; Ph. D., Cornell University, 1925. Instructor in Zoology, Utah State Agricultural College, 1913-14; Professor of Biology, Latter-day Saints University, 1914-18; Instructor in Zoology and Entomology, Utah State Agricultural College, 1920-21; Assistant Professor, 1921-25; Associate Professor, 1925-26; Professor of Entomology, 1926—.

BYRON ALDER

Professor of Poultry Husbandry

B. S., Utah State Agricultural College, 1912. Assistant Professor of Poultry Husbandry, Utah State Agricultural College, 1913-25; Associate Professor, 1925; Professor, 1927—.

E. LOWELL ROMNEY

Director of Athletics

A. B., University of Utah, 1917. Second Lieutenant, U. S. Army, 1917-18; Director of Athletics, Utah State Agricultural College, 1919—.

P. V. CARDON

Director of Experiment Station

B. S., Utah State Agricultural College, 1909. Assistant Agronomist, 1909-11, Agronomist, 1911-13, Utah State Agricultural Experiment Station cooperating with U. S. Department of Agriculture, in charge Nephi Dry-farm Substation; Agronomist, U. S. Department of Agriculture, 1913-20; Professor of Agronomy, and Agronomist, Montana State College, and Director, Montana Grain Inspection Laboratory, 1920-21; Director, Branch Agricultural College, 1921-22; Editor, Utah Farmer, 1922-25; Farm Economist, Utah Agricultural Experiment Station, 1925-28; Director, Utah Agricultural Experiment Station, 1928—.

ASA BULLEN

Special Lecturer in Commercial Law

B. S., Utah State Agricultural College, 1910; L. L. B., Harvard University, 1913. Lecturer in Law, Utah State Agricultural College, 1917—.

BRIGHAM CECIL GATES

Professor of Music

Graduate Scharwenka Conservatory, Berlin, 1910-13; Student of Eugene Hefley, New York, 1913; Student of the New England Conservatory, 1905. Head of Music Department, L. D. S. University, 1913-22; Managing director McCune L. D. S. School of Music and Art, 1920-25; Assistant director Salt Lake Tabernacle Choir, 1916-27; Musical director Lucy Gates Grand Opera Company, 1915-27; Teacher of music, Utah State Agricultural College, 1926; Professor of Music, 1927—.

JOSEPH ARCH GEDDES

Professor of Sociology

A. B., Brigham Young College, 1907; A. M., Columbia University, 1913; Ph. D., 1924. Principal Oneida Academy, 1914-19; Instructor in Economics, Branch Agricultural College, 1919-20; Professor of History and Social Science, Brigham Young College, 1922-26; Director, Division of Arts and Science, 1925-26; Associate Professor of Sociology, Utah State Agricultural College, 1926-28; Professor of Sociology, 1928—.

CHRISTINE BOCKHOLT CLAYTON

Professor of Foods and Dietetics

B. S., Utah State Agricultural College, 1915; Graduate Student University of Chicago, 1923; M. S., University of Minnesota, 1927; Fellow, Laura Spelman Rockefeller Memorial, Child Welfare, 1926-27. In Charge, Department of Home Economics, Branch Agricultural College, and Home Demonstration Agent for Iron County, 1919-22; Nutrition Specialist, Extension Division, Utah State Agricultural College, 1923-24. Assistant Professor of Foods, 1924-28; Professor of Foods, 1928—.

LYLE F. WATTS

Professor of Forestry

B. S. For., Iowa State College, 1913; M. F., 1928. United States Forest Service, 1913-1928; Timber Survey, Chief of Party, 1913-15; Timber Sales, 1916; Forest Planting, in Charge Pocatello Nursery, 1917; Assistant Supervisor, Boise National Forest, 1918-19; Forest Supervisor, Weiser, Idaho National Forests, 1920-26; Inspector of Timber Sales and Surveys and in Charge Forest Research, Intermountain District, Ogden, 1926-28; Professor of Forestry, Utah State Agricultural College, 1928—.

WILLIAM BOWKER PRESTON

Professor of Physiology, Health Supervisor of Students

M. D., University of Illinois, 1916; Graduate work, West Side Hospital, Chicago, Illinois, 1916; Captain Medical Corps, U. S. Army, 1917-19; Medical Examiner, U. S. Veteran's Bureau, Utah State Agricultural College, 1920-26; New York Polyclinic Hospital, 1926-27; Medical Supervisor of Students, 1920—.

AUGUST J. HANSEN

Associate Professor of Carpentry and Woodwork

B. S., Utah State Agricultural College, 1911. Assistant Instructor, Utah State Agricultural College, 1896-97; Instructor, 1897-1913; Assistant Professor of Carpentry and Woodwork, 1913-17; Associate Professor, 1917—.

AARON NEWHEY

Associate Professor in Machine Work

B. S., Utah State Agricultural College, 1912; Student, Stourbridge Technical School, England, 1884-1900; Student Dinwoody Institute, Spring, 1924. Assistant in Carpentry, Utah State Agricultural College, 1906-07; Instructor in Forging, 1907-14; Assistant Professor of Forging, 1914-17; Associate Professor of Forging, 1917-20; Associate Professor of Machine Work, 1920—.

ALFRED H. POWELL

Associate Professor of Farm and Auto Mechanics

Four Years Apprentice Machinist; Four Years, Iron, Bronze and Steel Foundryman Apprentice. Assistant in Automobile and Tractor Work, Utah State Agricultural College, 1918-19; Assistant Professor of Farm and Auto Mechanics, 1919-20; Associate Professor of Farm Mechanics, 1920—.

CHARLES TERRY HIRST

Associate Professor of Chemistry

B. S., Utah State Agricultural College, 1910; M. S., 1914; Graduate Student, University of California, 1918-19. Instructor in Chemistry, Utah State Agricultural College, 1910-15; Assistant Professor of Chemistry, Utah State Agricultural College, 1915-24; Associate Professor, 1924—.

SHERWIN MAESER

Associate Professor of Chemistry

A. B., Brigham Young University, 1909; Ph. D., University of California, 1921. Professor of Physics, Brigham Young University, 1916-19; Assistant in Chemistry, University of California, 1919-21; Assistant Professor of Chemistry, Utah State Agricultural College, 1921-24; Associate Professor, 1924—.

DON WARREN PITTMAN

Associate Professor of Agronomy

B. S., Iowa State College, 1914; M. S., Utah State Agricultural College, 1916. Instructor in Agronomy, Utah State Agricultural College, 1916-20; Assistant Professor of Agronomy, 1920-24; Associate Professor, 1924—.

*EDMUND BURKE FELDMAN

Associate Professor of Engineering

B. C. E., University of Cincinnati, 1916; Graduate Student, University of Minnesota, 1921-22; M. A., Utah State Agricultural College, 1927; C. E., University of Cincinnati, 1927. Structural Designer, New York Central and Northern Pacific Railroads, 1916-18; Assistant Engineer, U. S., Bureau of

*On leave of absence.

Aircraft Production, 1918-19; Bridge Designer, 1919-20; Structural Engineer, 1920-21; Instructor in Engineering, University of Minnesota, 1921-22; Assistant Professor of Engineering, Utah State Agricultural College, 1922-24; Associate Professor, 1924—.

JOSEPH R. JENSON

Associate Professor of Physical Education

A. B., Brigham Young College, 1908; Recreational Director, Mather Field Flying School, 1918; Graduate Student, University of Wisconsin, Summer of 1912; Columbia University, Summer of 1916; University of California, Summer of 1919. Assistant Professor of Physical Education, Utah State Agricultural College, 1917-25; Associate Professor, 1925—.

WALLACE J. VICKERS

Associate Professor of English

B. S., Utah State Agricultural College, 1912; M. A., Stanford University, 1925; Fellow in English, Stanford, 1925-26; Ph. D., 1926. Instructor in English, Latter-day Saints University, 1917-19; Head of the Department of English, 1919-20; Assistant Professor of English, Utah State Agricultural College, 1920-26; Associate Professor, 1926—.

F. B. WANN

Associate Professor of Plant Physiology

A. B., Wabash College, 1914; Ph. D., Cornell, 1920. Instructor in Botany, Cornell, 1915-23; Fellow in Biological Sciences, National Research Council, 1923-26; Associate Professor of Botany, Utah State Agricultural College, 1926—.

RALPH M. RUTLEDGE

Associate Professor of Economics

B. S., Oregon Agricultural College, 1914; M. S., University of Wisconsin, 1916; Graduate Student, University of Washington, 1923-26. Professor of Economics and Marketing, Amherst, 1916-17; Market Reporter U. S. Department of Agriculture, 1917-19; Commercial Marketing, Yakima, Washington, 1919-20; Associate Professor of Economics, Utah State Agricultural College, 1926—.

EZRA G. CARTER

Associate Professor of Public Health and Physiology

B. S., Utah State Agricultural College, 1913; M. S., 1919; Doctor of Public Health, University of Michigan, 1925; Graduate Student, Breslau University, Germany, Summer of 1914. Instructor in Bacteriology, Utah State Agricultural College, 1914-16; Dairy Bacteriologist, U. S. Public Health Service, 1917; Assistant Professor of Bacteriology and Physiology, 1918-27; Associate Professor of Public Health and Physiology, 1927—.

HENRY OBERHANSLEYAssociate Professor of Education*

A. B., Brigham Young University, 1914; Graduate Student, Iowa State College, 1920; Graduate Student, University of California, Summers of 1921, 23, 27, and Fall Semester, 1924. Principal, Iron County High School, 1916-18; Assistant State Leader, Junior Vocational Work, Extension Division, Utah State Agricultural College, 1918-20; Assistant Professor of Education and Psychology, Utah State Agricultural College, 1921-27; Associate Professor of Education and head of Department of Education, 1927—.

KATHERINE COOPER CARLISLE*Associate Professor Physical Education for Women*

B. S., Teachers' College, Columbia University, 1918; Diploma, State Normal School, Monclair, New Jersey, 1916; Tilestan Scholarship, Teachers' College, Columbia University, 1917-18. Instructor in Physical Education, Barnard College, 1918-21; Associate Professor of Physical Education for Women, Utah State Agricultural College, 1922-26; Specialist in Interpretative Dancing, 1927-28; Associate Professor of Physical Education for Women, Utah State Agricultural College, 1928—.

RAYMOND J. BECRAFT*Associate Professor of Range Management*

B. S., Utah State Agricultural College, 1917; M. S., Iowa State College, 1923. Grazing Examiner, United States Forest Service, 1917-19; Fellow in Botany, University of Chicago, 1926-27; Assistant Professor of Range Management, Utah State Agricultural College, 1919-28; Associate Professor, 1928—.

GEORGE DEWEY CLYDE*Associate Professor of Engineering*

B. S., Utah State Agricultural College, 1921; M. S., University of California, 1923. Assistant Professor of Irrigation and Drainage, Utah State Agricultural College, 1923-28; Associate Professor, 1928—.

ALMA NICHOLAS SORENSEN*Associate Professor of English*

A. B., Brigham Young College, 1909; A. M., Harvard University, 1917. Instructor in English, Brigham Young College, 1909-10; Professor of English, 1912-26; Assistant Professor of English, Utah State Agricultural College, 1926-28; Associate Professor, 1928—.

*On leave of absence.

ERNEST A. JACOBSEN

Associate Professor of Education

A. B., Brigham Young University, 1920; M. A., 1923; Graduate Student in Education, University of California, 1928-29 and during Summer Sessions, 1924, 1925, 1927, 1928, and Summer Quarter, 1929. Principal of Uintah Academy, 1920-23; Superintendent, North Summit School District, 1923-28; Associate Professor of Education, Utah State Agricultural College, 1929—.

LEGRANDE R. HUMPHERYS

*State Supervisor of Vocational Agriculture, In Charge Teacher
Training in Agriculture and Shop Work*

B. S., Utah State Agricultural College, 1912. Associate Professor Farm Mechanics, Utah State Agricultural College, 1912-20; State Supervisor of Agricultural Education, 1926-27—.

CHARLOTTE KYLE

Assistant Professor of English

B. A., and M. A., Park College. Instructor in English, Utah State Agricultural College, 1907-16; Assistant Professor, 1916—.

LEON D. HARDY

Assistant Professor in Correspondence-Study Department

B. S., Utah State Agricultural College, 1917; M. S., 1929. Assistant, Correspondence-Study Department, Utah State Agricultural College, 1917-20; Assistant Professor, 1920—.

SAMUEL ROY EGBERT

Assistant Professor of Forging

B. S., Utah State Agricultural College, 1923. Assistant in Forging, Utah State Agricultural College, 1920-21; Assistant Professor, 1921—.

CHARLOTTE E. DANCY

Assistant Professor of Nursing, Dean of Women

Graduate Nurse, Johns Hopkins Training School, 1896; Head Nurse, Johns Hopkins Training School, 1896-1901; Assistant Superintendent of Nurses, University Hospital, Columbus, Ohio, 1901-02; In Charge, District Nursing Work in Newark, 1903-06; Graduate Student, Battle Creek Sanitarium and Instructor in Mental Hospital, Elgin, 1906-08; In Charge, Surgical Department, 1908-10; Superintendent of Nurses, Latter-day Saints Hospital, 1910-20; In Charge, Home Health and Nursing, Extension Division, Utah State Agricultural College, 1920-21; Assistant Professor of Nursing, 1921—.

*N. E. EDLEFSEN

Assistant Professor of Physics

B. S., Utah State Agricultural College, 1916; M. A., University of California, 1923. Instructor in Physics, Utah State Agricultural College, 1916-23; Assistant Professor, 1923—.

AARON F. BRACKEN

Assistant Professor of Agronomy

B. S., Utah State Agricultural College, 1914; M. A., 1924; Graduate Student University of Minnesota, 1926-27. Foreman, Nephi Experiment Station, 1914-17; Instructor in Farm Management, Extension Division, Utah State Agricultural College, 1917-18; Scientific Assistant in Agronomy, U. S. D., 1918-20; Superintendent, Nephi Sub-Station and Instructor in Agronomy, 1921-24; Assistant Professor, 1924—.

ALMA ESPLIN

Assistant Professor of Wool Management

B. S., Utah State Agricultural College, 1916; Graduate Student, University of Wyoming, 1924-25; Studying Wool Grading and Manufacturing, Washington, Philadelphia and Boston, Spring of 1925. County Agricultural Agent, Iron County, 1916-24; Assistant Professor of Wool Management, Utah State Agricultural College, 1925—.

ARIEL C. MERRILL

Assistant Professor of Dairy Manufacturing

B. S., Utah State Agricultural College, 1926; M. S., Michigan State College, 1928; Fellow, Michigan State College, 1926-28; Superintendent of Cheese Manufacture, Swift and Co., Chicago, 1928-29; Assistant Professor, Utah State Agricultural College, 1929—.

RUSSELL ELWOOD BERNTSON

Executive Secretary, Treasurer and Purchasing Agent

VERA CARLSON

Secretary to the President

HATTIE SMITH

Assistant Librarian

DAN ARTHUR SWENSON

Assistant Professor of Carpentry and Woodwork

B. S., Utah State Agricultural College, 1915; Student Armour Institute of Technology, Summer, 1919. Assistant in Carpentry and Woodwork, Utah State Agricultural College, 1913-16; Instructor, 1916-26; Assistant Professor, 1926—.

*Absent on leave.

FANNIE MAUGHAN VERNON

Assistant Professor of English Extension

SIDNEY STOCK

Assistant Professor of Farm and Auto Mechanics

B. S., Utah State Agricultural College, 1922. Instructor in Auto Mechanics, Ignition, Starting and Lighting, and Storage Batteries, Utah State Agricultural College, 1919-26; Assistant Professor of Farm and Auto Mechanics, 1926—.

CHARLES E. McCLELLAN

Assistant Professor of Education

A. B., Brigham Young University, 1914; M. A., Utah State Agricultural College, 1923; Fellow in Education, Stanford University, 1925-26; Graduate Student University of California, Summer, 1926. Superintendent of Schools, Rigby, Idaho, 1914-15; Principal, Millard Academy, 1915-17; Superintendent of Schools, 1918-21; Instructor in English and Education, Utah State Agricultural College, 1921-23; Instructor in Education, 1923-25; Assistant Professor of Education, 1926—.

REED BAILEY

Assistant Professor of Geology

B. S., University of Chicago, 1924; M. S., University of Chicago, 1927; Geological Survey Work in Utah, Summer of 1922, and in Missouri, Summer of 1923. Instructor in Geology, Utah State Agricultural College, 1924-26; Assistant Professor, 1926—.

*WALTER WELTI

Assistant Professor of Vocal Music

B. A., Cornell University, 1924; Graduate Student, 1924-25; Graduate Student, New York University, 1926. Instructor in English, Utah State Agricultural College, 1925-26; Assistant Professor of Vocal Music, 1926—.

JOHN LAWRENCE HANLEY

Assistant Professor of Military Science and Tactics

U. S. M. A., 1918. First Lieutenant, Coast Artillery Corps, United States Army.

DELROY V. GARDNER

Assistant Professor of Accounting

B. S., Utah State Agricultural College, 1922; M. B. A., Harvard, 1927. Assistant Professor of Accounting, Utah State Agricultural College, 1927—.

*On leave Fall Quarter.

DELMAR C. TINGEY

Assistant Professor in Agronomy

B. S., Utah State Agricultural College, 1922; M. A., 1924. Assistant in Agronomy, Utah State Agricultural College, 1922-25; Instructor, 1925-27; Assistant Professor, 1927—.

HARRY H. SMITH

Assistant Professor in Animal Husbandry

B. S., University of Nebraska, 1920; M. S., Colorado Agricultural College, 1926. Instructor in Animal Husbandry and Superintendent Scotts-bluff Experiment Station, University of Nebraska, 1920-21; Instructor in Meats, Colorado Agricultural College, 1921-24; Assistant Professor in Meats, 1924-27; Superintendent Meat Awards, Western National Livestock Show, Denver, 1922-27; Assistant Professor in Meats and Stock Judging, Utah State Agricultural College, 1927—.

FRANCIS M. COE

Assistant Professor of Horticulture

B. S., Oregon Agricultural College, 1923; M. S., Iowa State College, 1924. Instructor in Horticulture, and in charge of Nebraska Fruit Farm, University of Nebraska, 1925-26; Assistant Professor of Horticulture, Utah State Agricultural College, 1927—.

WALTER U. FUHRMAN

Assistant Professor of Agricultural Economics

B. S., Utah State Agricultural College, 1925; Graduate Student University of California, 1926-28; Research Assistant in Agricultural Economics, College of Agriculture, University of California, August, 1926, to September, 1928. Assistant Professor of Agricultural Economics, Utah State Agricultural College, 1928—.

CHESTER J. MYERS

Assistant Professor in Speech

A. B., University of Utah; A. M., University of Iowa, 1925. Professor of Dramatic Art and Public Speaking, Weber College, 1925-26; Instructor in Public Speaking, Utah State Agricultural College, 1926-29; Assistant Professor, 1929—.

HERBERT BLEND KRAFT

Assistant Professor of Military Science and Tactics

B. S., M. E., Purdue University, 1909; Graduate Infantry School, 1922; Graduate Coast Artillery School, Battery Officer's Course, 1926. First Lieutenant, Coast Artillery Corps, United States Army.

CHARLES M. GENAUX

Assistant Professor in Forestry

B. S., In Forestry, Pennsylvania State Forest School, 1924; Summer 1924, Dr. Schenck Student's Forest Tour of Europe; M. F. in Forest Pathology, Idaho University, 1929. 1924-25 Research Assistant Pennsylvania Dept. of Forestry and Waters and Bureau Public Roads; 1926-28, Instructor of Forestry and in charge of State Forest Nursery, Washington State College; Assistant Professor of Forestry, Utah State Agricultural College, 1929—.

WILLIAM HAROLD BELL

Registrar

B. S., Utah State Agricultural College, 1923. Office Manager, Service Motor Company, 1923-24; Accountant, Secretary's Office, Utah State Agricultural College, 1924-25; Assistant Registrar, 1925-29; Registrar, 1929—.

EMIL HANSEN

*Instructor in Landscape Gardening, Extension and Consulting
Landscape Architect*

Graduate, Technical School in Landscape Gardening, Denmark; Fellow Royal Garden Association, 1895-97. Instructor, Stormley School of Gardening, Norway, 1897-99; Landscape Gardener, Wandamere Park, Salt Lake City, 1904-06; Landscape Gardener, Rose City Cemetery, Portland, 1906-14; Superintendent, Grounds and Greenhouses, Utah State Agricultural College, 1914; Assistant in Horticulture, 1918-20; Instructor, 1920—.

CLARENCE J. HAWKINS

Band Master

THELMA FOGELBERG

Instructor in Stenography and Business Practice

B. S., Utah State Agricultural College, 1929. Instructor in Stenography and Business Practice, Utah State Agricultural College, 1919—.

HARRY R. REYNOLDS

Instructor in Art

Graduate of the three-year course, Art Institute, Chicago, 1923. Instructor in Art, Utah State Agricultural College, 1923—.

*H. LORAN BLOOD

Instructor in Botany and Plant Pathology

B. S., Utah State Agricultural College, 1926. Assistant in Botany and Plant Pathology, Utah State Agricultural College, 1924-26; Instructor, 1926—.

*On leave of absence.

FRED HAMMERLY

Instructor in English

B. A., University of Wisconsin, 1925; M. A., 1926. Instructor in English, Utah State Agricultural College, 1926—.

MILTON MERRILL

Instructor in History

B. S., Utah State Agricultural College, 1925. In Charge, Information-Service Department, 1927—.

KATHLEEN L. HULL

Instructor in Botany

B. A., McMaster University, Toronto, Canada, 1924; M. A., McMaster University, 1925; Ph. D., University of Chicago, 1928. Instructor in Plant Pathology, University of Chicago, Summer, 1927; Assistant in Plant Pathology, University of Chicago, 1927-28; Instructor in Botany, Utah State Agricultural College, 1928—.

VANCE H. TINGEY

Instructor in Engineering and Mathematics

B. S., Utah State Agricultural College, 1929. Field Engineer, Brigham City, 1914-18; Instructor in Mathematics Box Elder High School, 1918-28; County Engineer Box Elder County; Instructor in Engineering and Mathematics, Utah State Agricultural College, 1929—.

HELEN PIXTON

Instructor in Foods

B. S., University of Utah, 1923; M. S., Oregon State College, 1929; Summer, 1924, Utah State Agricultural College; Summer, 1926, University of Chicago. Assistant in Agricultural Extension, University of California, 1927-28; Instructor in Foods, Utah State Agricultural College, 1929—.

HELEN EADES

Instructor in Textiles and Clothing

B. S., University of Oklahoma, 1928; M. A., Teachers College, Columbia University, 1929. Instructor in Textiles and Clothing, Utah State Agricultural College, 1929—.

HAMLET C. PULLEY

Instructor in Bacteriology

B. S., Utah State Agricultural College, 1925; M. S., 1929. Instructor in Bacteriology, Utah State Agricultural College, 1929—.

VERDA E. DOWDLE

Instructor in Zoology and Entomology

B. S., Utah State Agricultural College, 1929. Instructor in Zoology and Entomology, Utah State Agricultural College, 1929—.

GEORGE S. BATES

Instructor in Education

B. S., Utah State Agricultural College, 1917; M. A., 1925. Principal, Milford High School, 1917-20; Instructor in Social Science, South Cache, 1920-26; Principal Logan Junior High School, 1927-29; Principal Logan High School, 1929—.

ALVIN HESS

Instructor in Education

B. S., Utah State Agricultural College, 1928; M. S., 1929. Teacher Box Elder School District, 1915-19, 1920-25; Critic teacher and instructor in mathematics, Logan Junior High School, 1928-29; Principal Logan Junior High School, 1929—.

FRANCES BARBER

Instructor in Education and Superior of Normal Training

B. S., Teachers College, Columbia University, 1928. Critic teacher, B. Y. C., two years; Assistant, Department of Education, Weber College, 1924-26; Supervisor Normal Training, Utah State Agricultural College, 1928—.

RUTH MOENCH BELL, B. S.

Assistant in English (part time)

GEORGE C. JENSEN, A. M.

Assistant in English (part time)

MARY SORENSON

Assistant in Library

CHARLES BATT

Superintendent of Water and Heating

RASMUS OLUF LARSON

Superintendent of Buildings and Grounds

STANDING COMMITTEES**1929-30**

The President of the College is ex-officio a member of each standing committee.

Advanced Standing—Mr. W. H. Bell.

Attendance and Scholarship—Professors W. W. Henderson, Pedersen, Vickers, Jenson, Dancy.

Athletic Council—Professors A. N. Sorensen, George B. Caine, E. L. Romney, Mr. R. E. Berntson.

Awards and Honors—Professors Ikeler, Linford, Moen, R. B. West.

Boy Scout Activity—Professors Calvin, Fletcher, Richards.

Campus Improvement—Professors Cardon, Clyde, Fletcher, Mr. Emil Hansen.

Certification of Teachers—Professors Saxer, Jacobsen, McClellan, Mr. Bell.

College Assemblies—Professors N. A. Pedersen, W. W. Henderson, Mrs. Hendricks.

Credits from Sectarian Institutions—Professors Saxer, Ikeler, Mr. Bell.

Debating—Professors Vickers, Daines, Geddes, N. A. Pedersen, D. V. Gardner, Fuhrman.

Entrance—Professors Hirst, Egbert, Feldman, Pack, Carter.

Exhibits—Professors R. B. West, Ikeler, Moen, A. J. Hansen, Alder, Mr. Merrill, Mr. Emil Hansen.

Graduate Work—Professors F. L. West, William Peterson, Greaves, Stewart, P. E. Peterson.

Graduation—Professors Maeser, P. E. Peterson, Mr. Bell.

High School Relations Committee—Professors Reed Bailey, Henry Peterson, William Peterson, Kewley, Romney, Geddes, Mr. Merrill, Wilford Porter, D. V. Gardner.

Incomplete Grades—Professor Ricks.

Library—Professors Ricks, A. N. Sorensen, Stewart, Arnold, R. B. West, Miss Smith, and Miss Kewley.

Loan Fund—Mr. Berntson, Professors Stewart, Dancy.

Physical Education and Military Work—Professors Hill, Ikeler, Becraft, Newey, Dr. Preston.

Rhodes Scholarship—Professors Arnold, Sorensen, Maeser.

Recommendation for Employment—Professors McClellan, R. B. West, Kewley.

Sectioning Committee—Professors Daines, Moen, Kewley, Carter Kyle, Wann, Hammerly, Hull, Fogelberg.

Schedule and Catalogue—Mr. W. H. Bell, Professors Saxer, A. N. Sorensen.

Student Affairs—Professor Jenson.

Student Body Organization—Professors N. A. Pedersen, McClellan, D. V. Gardner.

Student Employment—Mr. Burgoyne.

NORMAL TRAINING SCHOOL STAFF

1929-30

A. H. SAXER, Ph. D.
Dean, School of Education

C. E. McCLELLAN, M. A.
Director of Teacher Training

FRANCES BARBER, B. S.
Supervisor

ADDIE SWAPP
Assistant Principal
In Charge of Second Grade

MAIDA C. JENSEN
In Charge of Sixth Grade

THELMA GARFF
In Charge of Fifth Grade

WANDA ROBERTSON
In Charge of Fourth Grade

MAY JENSEN
In Charge of Third Grade

FLORENCE ANDERSON, A. B.
In Charge of First Grade

EMMA ECCLES JONES, M. A.
In Charge of Kindergarten

EXPERIMENT STATION STAFF
1929-30

PHILIP VINCENT CARDON, B. S.
Director

WILLIAM PETERSON, B. S.
Geologist

HYRUM JOHN FREDERICK, D. V. M.
Veterinarian

JOSEPH EAMES GREAVES, Ph. D.
Chemist and Bacteriologist

GEORGE BALLIF CAINE, A. M.
Dairy Husbandman

REUBEN LORENZO HILL, Ph. D.
In Charge, Human Nutrition Investigations

GEORGE STEWART, Ph. D.
Agronomist

ORSON WINSO ISRAELEN, Ph. D.
Irrigation and Drainage Engineer

BYRON ALDER, B. S.
Poultryman

DAVID STOUT JENNINGS, Ph. D.
In Charge, Soils Investigations

WILLARD GARDNER, Ph. D.
Physicist

BERT LORIN RICHARDS, Ph. D.
Botanist and Plant Pathologist

KENNETH COLE IKELER, M. S.
Animal Husbandman

HERBERT J. PACK, Ph. D.
Entomologist

W. PRESTON THOMAS, M. S.
Agricultural Economist

*LUTHER MURKINS WINSOR, M. S.
Associate Irrigation and Drainage Engineer

CHARLES TERRY HIRST, M. S.
Associate Chemist

DON WARREN PITTMAN, M. S.
Associate Agronomist

FRANK B. WANN, Ph. D.
Associate Plant Physiologist

JOSEPH A. GEDDES, Ph. D.
Associate Rural Sociologist

GEORGE D. CLYDE, M. S.
Associate Irrigation and Drainage Engineer

A. C. ESPLIN, B. S.
Associate Animal Husbandman

RAYMOND J. BECRAFT, M. S.
Associate in Range Management

AARON F. BRACKEN, M. S.
Superintendent, Nephi Dry-farm Substation

*A. L. WILSON, M. A.
Superintendent, Davis County Experimental Farm

CHARLES J. SORENSON, M. A.
Assistant Entomologist

DELMAR C. TINGEY, M. A.
Assistant Agronomist

MRS. ALMEDA PERRY BROWN, M. A.
Assistant in Home Economics

GEORGE F. KNOWLTON, M. S.
Assistant Entomologist

FRANCIS M. COE, M. S.
Assistant Horticulturist

*On leave, 1929-30.

*H. LORAN BLOOD, M. S.

Assistant Plant Pathologist

KATHLEEN L. HULL, Ph. D.

Assistant Plant Pathologist

HARRY H. SMITH, B. S.

Assistant Animal Husbandman

HAMLET C. PULLEY, M. S.

Assistant Bacteriologist

GEORGE Q. BATEMAN, B. S.

Superintendent, Dairy Experimental Farm

JOHN W. CARLSON, M. A.

Superintendent, Uintah Basin Alfalfa-Seed
Experimental Farm

LEMOYNE WILSON, B. S.

Superintendent, San Pete County Experimental Farm

I. DELOS ZOBELL, B. S.

Superintendent, Carbon County Experimental Farm

BENJAMIN F. HULME, B. S.

Superintendent, Panguitch Livestock Farm

RUSSELL E. BERNTSON,

Secretary and Purchasing Agent

BLANCHE CONDIT PITTMAN, A. B.

Librarian and In Charge, Publications Division

EDITH HAYBALL, B. S.

Assistant Statistician

STELLA SORENSON, B. S.

Stenographer

MAIDA MUIR, B. S.

Stenographer

In Cooperation with U. S. Department of Agriculture

C. M. TOMPKINS, Ph. D.

Assistant Pathologist,

Sugar-beet Investigations,

Bureau Plant Industry

DAVID A. BURGOYNE, B. S.

Secretary to the Director

*On leave, 1929-30.

EXTENSION SERVICE STAFF

WILLIAM PETERSON, B.S.
Director

WILLIAM WHITE OWENS, B. S., M. A.
Assistant Director and County Agent Leader

RENA BAKER MAYCOCK
State Leader, Home Demonstration Work

JAMES CHRISTENSEN HOGENSON, M. S. A.
Extension Agronomist

BYRON ALDER, B. S.
Extension Poultryman

EMIL HANSEN
Extension Horticulturist, Landscaping

AFTON ODELL, B. S.
Extension Specialist in Clothing

DAVID P. MURRAY, B. S.
State Boys' and Girls' Club Specialist

ALMA C. ESPLIN, B. S.
Extension Animal Husbandman, Sheep

EFFIE SMITH BARROWS, B. S.
Extension Economist, Home Management

ELNA MILLER, B. S., M. S.,
Extension Nutritionist

KENNETH C. IKELER, B. S., M. S.,
Extension Animal Husbandman

GEORGE B. CAINE, B. S., A. M.
Extension Dairyman

ROBERT H. STEWART, B. S.
Asst. Professor, County Extension Agent, Box Elder County

ROBERT L. WRIGLEY, B. S.
Asst. Professor, County Extension Agent, Cache County

WILLIAM J. THAYNE, B. S.
Asst. Professor, County Extension Agent, Utah County

ORSON P. MADSEN, B. S.

Asst. Professor, County Ext. Agent, Carbon and Emery Counties

ALBERT E. SMITH, B. S.

Asst. Professor, County Extension Agent, Juab County

DELORE NICHOLS, B. S.

Asst. Professor, County Extension Agent, Davis County

ARCHIE L. CHRISTENSEN, B. S.

Asst. Professor, Extension Agent, Weber County

CHARLES O. STOTT, B. S.

Asst. Professor, County Extension Agent, Sanpete County

STEPHEN R. BOSWELL, B. S.

Assistant Professor, Extension Agent, Sevier County

ELLEN AGREN, B. S.

Asst. Prof., District Extension Agent, Weber, Morgan and Summit Counties

VERE L. MARTINEAU, B. S.

Assistant Professor, County Extension Agent, Salt Lake County

CLYDE R. RICHARDS, B. S.

Assistant Professor, County Extension Agent, Morgan County

MORGAN P. McKAY, B. S.

Assistant Professor, County Extension Agent, Millard County

IVY LOWRY HALL, B. S.

Assistant Professor, Home Demonstration Agent, Salt Lake County

ERASTUS PETERSON, B. S.

Assistant Professor, County Extension Agent, Uintah County

DAVID SHARP, JR., B. S.

Assistant Professor, County Extension Agent, Summit County

LEW MAR PRICE, B. S.

Assistant Professor, County Extension Agent, Beaver County

LYMAN H. RICH, B. S.

Assistant Professor, County Extension Agent, Wasatch County

HUGH HURST, B. S., D. V. M.

Assistant Professor, County Extension Agent, Tooele County

MYRTLE DAVIDSON, B. S.

Assistant Professor, District Agent, Cache and Box Elder Counties

WALTER F. SMITH, B. S.

Assistant Professor, County Extension Agent, Washington County

WILLIAM R. SMITH, B. S., D. V. M.

Assistant Professor, County Extension Agent, Rich County
(Part-time Cooperation with Wyoming)

ANSON B. CALL, JR., B. S., M. S.

Assistant County Extension Agent, Utah County

RUTH ZOLLINGER, B. S.

Assistant Professor, Home Demonstration Extension Agent, Tooele County

ALICE E. PEDERSEN, B. S.

Assistant Prof., District Extension Agent, Uintah and Duchesne Counties.

LEROY C. FUNK, B. S., M. S.

Assistant Professor, County Extension Agent, Duchesne County

C. A. HYMAS, B. S.

Assistant Professor, County Extension Agent, Piute and Garfield Counties

RUBY STRINGHAM, B. S.

Assistant Professor, Home Demonstration Extension Agent, Davis County

WILFORD D. PORTER, B. S.

Secretary to Director and Extension Editor

IDA R. MITCHELL

Clerk

MARY HANSEN

Stenographer

Utah State Agricultural College

The Utah State Agricultural College is in Logan, the county seat of Cache county, one of the most prosperous agricultural sections in the State. The city has a population, thrifty and progressive, of about 12,000; it is quiet, orderly, clean and generally attractive. An excellent bus line serves the city. Logan is on the Yellowstone Highway, the Utah Idaho Central Electric line and the Oregon Short Line Railroad.

The College, uniquely situated on a broad hill overlooking the city, one mile east of Main Street, commands a view of the entire valley and surrounding mountain ranges. The site of the College was formed by the receding waters of prehistoric Lake Bonneville, which built an enormous delta at the mouth of Logan canyon upon which the College buildings and farms are located. The beauty and geological significance of the location are perhaps unsurpassed. A half mile to the south is Logan river. A mile to the east is a magnificent mountain range with a picturesque canyon. In other directions are town and farms of Cache County distinctly visible through the clear atmosphere. The valley is a fertile, slightly uneven plain, 4,600 feet above sea level, about twelve by sixty miles in dimensions, almost entirely under cultivation and surrounded by the Wasatch mountains. It is one of the most attractive and healthful valleys in the West.

POLICY

The Utah State Agricultural College provided, in accordance with the spirit of the law under which it was organized, a liberal, thorough, and practical education. The two extremes in education, empiricism and the purely theoretical, are avoided; for the practical is based upon and united with the thoroughly scientific. In addition to the practical work of the different courses, students are given thorough training in the sciences, mathematics, history, English, art, music, speech, modern language, and other related subjects. The object is to foster all that makes for right living, good citizenship, and high efficiency.

Under this general policy, the special purpose of the Utah State Agricultural College is to be of service in the upbuilding of the State and the great West to which it belongs. The instruction in agriculture and engineering, in addition to the purely professional aspects of these fields of study, deals with the special problems relating to the conquest of the great areas of unoccupied lands, the development of engineering structures, the proper use of the water supply, and the kinds of crops or live stock which in Utah

may be most profitable; instruction in mechanic arts points out the most promising trades and teaches them so as to meet the needs of the State; instruction in commerce relates to the undeveloped resources and the present commercial conditions of the State, and investigates the principles and methods to be applied in the commercial growth of Utah; instruction in home economics teaches the women right living and economic independence.

The Constitution of Utah establishes the Utah State Agricultural College and the University of Utah as the two public institutions of higher learning in Utah. Each of these institutions is independent in government, although each is a part of the public school system. Each, under the Constitution and the statutes of Utah and in harmony with the rulings of their respective governing boards, offers undergraduate and graduate work leading to the Bachelor's and Master's degrees. The College, in addition to this high status given it in Utah under the Constitution, is one of forty-eight institutions in the United States definitely recognized by the Federal government as the institution of higher learning in the respective states for the development of the Federal program of education included in the Morrill and Nelson Acts of the Federal Congress.

HISTORY

The Utah State Agricultural College was founded March 8th, 1888, when the Legislative Assembly accepted the terms of the national law passed by Congress on July 2nd, 1862. Under this Act of Congress, and the Enabling Act providing for the admission of Utah to the Union, 200,000 acres of land were granted to the State from the sale of which there should be established a perpetual fund, the interest to be used in maintaining the College.

Under the Hatch Act, approved in 1887, the State receives \$15,000 annually for the Experiment Station. Under the Adams Act of 1906, the State receives an additional \$15,000 annually for research work by the Experiment Station. Under the Morrill Act of 1890, amended by the Nelson Act of 1907, the State receives \$50,000 annually for instruction at the Agricultural College. Under the Smith-Lever Act, the State receives annually about \$34,000 for agricultural extension work to be done by the Agricultural College. Under the Purnell Act, the State will receive in 1928-29 an appropriation of \$50,000, which will increase by \$10,000 each year until an annual income of \$60,000 has been reached, for special work in agricultural and home economics.

These Federal appropriations, together with the annual income from the land-grant fund, represent the income received from the general government. Since most of these funds must be used, in accordance with the law, for specific purposes, the institution is dependent on State appropriations for funds with

which to provide additional instruction and for general maintenance. These needs have been generously met in the past by the Legislative Assemblies of the State. In 1888 the sum of \$15,000 was appropriated for buildings, and the county of Cache and the city of Logan gave one hundred acres of land on which to build the College. Since that time the State has, from time to time, appropriated sufficient funds to erect and maintain most of the buildings described in a later section, besides providing for instruction, experimentation, and extension work.

By legislative action, the College receives annually 28.34 per cent of 28 per cent of the total tax revenue of the State, after deducting the revenue from 2.4 mills on the total State valuation (which is not to be exceeded), set aside for the support of the elementary and the high schools. Special maintenance appropriations are made by the legislature for general support, and for buildings. The State, moreover, provides adequately for extension purposes and experimental work.

In September, 1890, the Institution was opened for the admission of students. Degree courses were offered in agriculture, domestic art, civil engineering, mechanic arts, and commerce; a preparatory course and short courses in agriculture and engineering were also given. Since that time many improvements have been made in the courses. Some have been abolished; various special, practical, year and winter courses in agriculture, commerce, mechanic arts and home economics have been added; the standard of the college work has been raised. In 1903 the Board of Trustees established the School of Home Economics, the School of Mechanic Arts, the School of Commerce and Business Administration, and the School of General Science, and in 1911 the School of Agricultural Engineering. In 1923, the School of General Science was renamed the School of Basic Arts and Science; in 1927, Arts and Science.

In 1913, the Branch Normal School at Cedar City was made a branch of the Utah State Agricultural College, and is so maintained.

During 1926-27 the home ideal of the Institution was furthered by the completion of the Home Economics Cottage. Also, the athletic program of the College received a new impetus in the erection of the Stadium on a valuable tract of land acquired by gift from the County Commissioners and the Commissioners of Logan City. Scholastic achievements of the same year were, first, the admission of the Utah State Agricultural College to the accepted list of the Association of American Universities; and second, the expansion of the curriculum of the Institution through the enactment by the State Legislature of the Peters' Course of Study Bill, which authorized the establishment of the Schools of Engineering and Education, removed restrictions in the

work in Commerce, and formally authorized the giving of major work in the arts as well as in the sciences. Such enlargements have qualified the College to meet more adequately the needs of the State, and to fill better her position in higher education.

In 1929, the State Legislature codified the laws of the State relating to the College, and changed the name to Utah State Agricultural College.

GOVERNMENT

The government of the College is vested in the Board of Trustees and, under its control, in the four other administrative bodies,—the Deans' and Directors' Council, the College Council, the College Faculty, and the Staff of the Experiment Station. These, in their several capacities, determine the policy and maintain the efficiency of the Institution.

THE BOARD OF TRUSTEES consists of thirteen members. Twelve are appointed by the Governor with the approval of the State Senate; the thirteenth is the Secretary of State who is ex-officio a member. This Board assumes the legal responsibility of the institution, cares for its general interests, and directs its course by the enactment of all necessary by-laws and regulations. Vested in it is the power to establish professorships, to employ the instructing force and other officers of the College, and to formulate the general policy of the Institution.

Between sessions, the power of the trustees rests with an executive committee, whose actions are referred to the Board for approval. In addition, there are committees, largely advisory, that deal with the general interests of the College.

THE DEANS' AND DIRECTORS' COUNCIL consists of the President, the Deans of the various schools,—Agriculture, Home Economics, Engineering, Commerce, and Arts and Science, the Dean of the Faculty, the Director of the Summer Session, the Directors of the Experiment Station and the Extension Division. This body has immediate supervision of Instruction and discipline in all the various schools. It constitutes a permanent executive and administrative committee of the College Council and Faculty.

THE BUDGET COMMITTEE, which is advisory to the President, consists of the Deans of the five Schools and the Executive Secretary of the Institution, the Dean of the faculty being chairman of the Committee. In all budget matters involving the Experiment Station or Extension Division, the respective Directors become members of the Budget Committee.

THE COLLEGE COUNCIL consists of the President of the College and all members of the faculty holding the rank of professor, associate professor, or assistant professor. Questions of discipline and policy are decided by this body.

THE COLLEGE FACULTY includes the President, professors, associate professors, assistant professors, ranking professors, instructors, and assistants. It is concerned with ordinary questions of methods and discipline and with other matters pertaining to the general welfare of the College.

THE STANDING COMMITTEES have delegated to them the immediate direction of all the phases of college life. The conduct of the student in his college home, and his regularity in performing college duties; the publications of the College and of the students; the interests of the students on the athletic field, in the amusement halls, and their various organizations,—all are within the province of appropriate committees.

THE EXPERIMENT STATION STAFF consists of the President of the College, the Director of the Station, and the heads of departments and their associates and assistants. The staff is engaged in the investigation of problems peculiar to agriculture and rural welfare in this part of the country. It is further responsible for the circulation, through its various publications and correspondence, of such information as is of practical value to the farming communities.

THE EXTENSION DIVISION consists of the President of the College, the Director of the Extension Division, and the various Specialists, County Agents, and Home Demonstrators.

THE STUDENTS. The College is maintained at public expense for public good. The students, therefore, are under a peculiar obligation to perform faithfully all their duties to the State, the Institution, and the community. Most important of these is an active interest in all that concerns the moral and intellectual welfare of the College. Regularity of attendance, faithful attention to studies, and exemplary personal conduct are insisted upon at all times by the administrative bodies of the College.

DIVISIONS OF THE COLLEGE

The work of the College falls into three distinct divisions: first, the College Proper, giving instruction on the home campus of the College; second, the Research Division, having for its object the discovery of new truth or the new application of established truth, for the advancement of life; third, the Extension Division, which carries instruction to the people who can not come to the College Campus.

To accomplish this work the following administrative divisions exist:

I. The College Proper.

The School of Agriculture and Forestry.

The School of Arts and Science.

The School of Commerce.

The School of Education.

The School of Engineering.

The School of Home Economics.

The Summer Session.

II. Research.

Experiment Station.

III. Extension.

The Extension Division.

The instructional and investigational forces with the equipment necessary to carry out the work of the above divisions are organized into departments of co-ordinate authority, each of which represents a somewhat definite field of knowledge. All officers of instruction or experimentation belong to one or another of these departments. One professor, designated head, carries the administrative responsibility of the department.

THE SCHOOL OF AGRICULTURE AND FORESTRY

KENNETH C. IKELER, Dean

Agriculture is the largest and most fundamental single industry, and is one of the most promising of modern professions. The new agriculture is not a profession of unceasing toil. The business of scientific farming challenges the training and ability of the best young blood of our nation. The freedom, health, intellect and profit derived from the new and scientific agriculture are attracting large numbers of thinking people. Utah and the entire Intermountain West will continue to offer excellent opportunities to those who prepare themselves for scientific agricultural pursuits.

Most of the students who graduate in Agriculture come from the farm, but not all of them. The Utah State Agricultural College is equipped to teach practical as well as scientific agriculture. Our aim is "Science with Practice." We teach the sciences underlying practical agriculture, and supplement these with studies of sufficient breadth to place the student upon the high intellectual level of those trained in other professions. A great deal of the college instructional work requires demonstration material. This is amply supplied by the college farm, the experimental plant breeding plots, and the numerous breeds of livestock and poultry.

The student about to enter training in the Science of Agriculture, may wish to know something of the opportunities offered in his chosen profession. Young men thoroughly trained in agriculture will find a large field for the exercise of their talents. It is not to be expected that all graduates trained in Scientific Agriculture will return to the farm. The demand is too great for agriculturally trained students in other allied lines of industry. Agriculture needs clear thinkers, and skilful doers, not only on crop and livestock farms and in orchards and gardens, but also in our banks, legislative halls, and educational institutions.

ADMISSION

See statement of entrance requirements of the College on page 78.

Students who expect to become candidates for the Bachelor's degree are reminded that they should complete the requirements of the Junior College before they will be allowed to enter the Senior College. Read carefully the statements regarding "Junior College," and "Senior College" found on Pages 80, 81.

GENERAL REQUIREMENTS FOR GRADUATION

Candidates for the Bachelor of Science degree must meet in full all entrance requirements and present 180 quarter hours of College work as outlined below (exclusive of the required courses in Physical Education).

THE FOUR BASIC GROUPS

The candidate must include work in each of the four basic groups as follows:

Language Group: 18 hours (English, Modern Languages, Public Speaking). Must include English 10, 11, 12 unless excused by the English Department.

Social Science Group: 12 hours (History, Economics, Political Science, Sociology).

Biological Science Group: 12 hours (Botany, Zoology, Public Health Bacteriology, Physiology.)

Exact Science Group: 12 hours (Chemistry, Physics, Mathematics, Geology, Accounting 101, 102, 103).

MAJOR SUBJECT

Every student, at the time he enters the Senior College, must select a major subject in which at the time of graduation he must have completed at least thirty quarter hours of work. The Student should consult with the professor in charge of his major work, and must secure the approval of the proposed combination of courses. (Read page 81).

In the School of Agriculture, students may major in the following departments: Agricultural Economics, Agronomy, Animal Husbandry, Bacteriology, Botany and Plant Pathology, Chemistry, Dairy Husbandry, Dairy Manufacturing, Entomology, Forestry and Range Management, Horticulture, Poultry Husbandry, Veterinary Science.

MINOR SUBJECTS

From eighteen to thirty hours in some field of work closely related to the major subject will be chosen by the candidate with the advice and consent of the major department and the Dean of the School. (See page 81).

SENIOR COLLEGE WORK

Fifty-four (54) hours of Senior College work taken after the candidate has completed at least 90 hours of work must be presented by each candidate for the B. S. degree. (See page 80 for a definition of Senior College work).

RESIDENCE SCHOLARSHIP, ETC.

See page 82 for requirements for graduation.

OUTLINE OF THE FOUR YEAR COURSE LEADING TO THE B. S. DEGREE IN AGRICULTURE

First Year

Language Group.....	9
Social Science.....	6
Biological Science.....	6
Exact Science.....	6
*Electives.....	18 to 24
<hr/>	

Total.....45 to 51

Second Year

Language Group.....	9
Social Science.....	6
Biological Science.....	6
Exact Science.....	6
*Electives.....	18 to 24
<hr/>	

Total.....45 to 51

*The electives should include at least 9 hours in the proposed major subject.

Third Year

Major Subject.....	9
Minor Subject.....	6
Speical Group.....	21
Electives.....	9 to 15
<hr/>	

Total.....45 to 51

Fourth Year

Major Subject.....	12
Minor Subject.....	6
Special Group.....	21
Electives.....	10 to 15
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Total.....45 to 51

THE B. S. DEGREE IN AGRICULTURE WITH HIGH SCHOOL TEACHER'S RECOMMENDATION

It is a decided advantage to candidates for the High School Teacher's Certificate to hold the standard Bachelor's degree in Agriculture if their major work is in this field. Arrangements have been made with the School of Education to provide candidates for the Bachelor of Science degree in Agriculture with the necessary professional educational courses to qualify them for the teacher's Professional High School Certificate. The High School Teacher's recommendation is given by the College, and the Professional High School Certificate is awarded by the State Board of Education, to those who include the following courses along with those presented for the B. S. degree:

The candidate must present 27 hours of Professional Educational subjects, which shall include Psychology 101 and either 102 or 103, and Education 111, 115, and 121 or their equivalents. The candidate's Biological Science group must include Bacteriology 1 and Health Education 108, and the Social Science group shall include 5 credits of applied Sociology or Ethics, and 5 credits in Economics or Political Science.

Graduates of Standard Normal Courses, or those who have had one or more years of successful teaching experience, may have some of these requirements waived. Consult the Dean in regard to this matter.

Candidates for the Bachelor's degree with the High School Teacher's recommendation will be allowed to use the 27 hours of professional education credits as desirable related work mentioned in their requirements for the major subject. (See page 81).

OUTLINE OF THE FOUR YEAR COURSE LEADING TO THE B. S. DEGREE IN AGRICULTURE AND THE TEACHER'S PROFESSIONAL HIGH SCHOOL CERTIFICATE

The first two years of this course will be the same as for the B. S. degree previously outlined, except that the candidate should elect in the Social Science and the Biological Science groups the particular courses mentioned in the preceding paragraph.

Junior and Senior Years

During the third and fourth years the student should complete his major and minor work as outlined for the B. S. degree and for his related work including the following:

Junior Year	Senior Year
Psychology 101 and 102	Training Educ. 115.....8 hours
or 103 .....6 hours	Psychology or Educa-
Education 111 and 121.....6 hours	tion.....7 hours

The following courses are suggestive for students in Vocational Agriculture with majors in Agronomy, Animal Industry, and Horticulture. All students in Vocational Agriculture should follow the same course in the Freshman and Sophomore years.

FRESHMAN YEAR

	Fall	Winter	Spring
Botany, 21, 22; Ag'l Botany.....	5	5	--
Bact., 1 and 2; Gen. Bacteriology.....	--	--	5
Eng., 10, 11, 12; Freshman Comp.....	3	3	3
A. E., 13; Farm Motors.....	3	--	--
Hort. 1; Gen. Hort.....	5	--	--
An. Hus. 1; Judging.....	--	5	--
Poultry, 1; General Poultry.....	--	--	4
M. A. Unit C.; Shop Work.....	--	--	3
Dairy, 2; Gen. Farm Dairying.....	--	4	--
	16	17	15

SOPHOMORE YEAR

	Fall	Winter	Spring
Chem., 3, 4, 26; Inorganic and Organic Chem.....	5	5	5
Ent., 13; Gen. Entomology.....	4	..	..
Agron., 1, 2.....	4	4	..
Zool., 1; Gen. Zoology.....	..	..	5
An. Hus., 2; Breed Types.....	..	5	..
Econ., 50; Ag. Ec., 51; Gen. and Ag'l Econ.....	3	..	3
A. E., 14; Farm Structures.....	..	3	..
A. E., 12; Irrigation and Drainage.....	..	..	3
	16	17	16

JUNIOR YEAR
(Agronomy and Soils)

Geology, 2, 3, 4.....	3	3	3
Zoology, 111; Genetics.....	5	..	..
Agronomy, 106, 108; Soils.....	4	4	..
Dairy Husb., 110; Production.....	..	..	4
Education, 111 and 121.....	..	3	3
Psychology, 101, and 102 or 103.....	3	..	3
English, 125, 126, 127; Journalism.....	2	2	..
An. Husb., 103; Feeding.....	..	5	..
Bacteriology, 109; Health.....	..	..	3
Electives.....	..	..	1
	17	17	17

SENIOR YEAR
(Agronomy and Soils)

Agronomy, 111, 112, 113; Seminar.....	1	1	1
Agronomy, 117; Geog. of Agric.....	..	3	..
Agronomy, 116 or 119.....	..	3	..
Ag. Ec., 102; Farm Adm.....	..	..	3
Horticulture, 102; Orchard Management.....	..	..	4
Marketing.....	3	..	..
Zoology, 14; Ec. Ent.....	..	4	..
Botany, 130; Plant Pathology.....	4	..	..
Agronomy, 104; Weeds, Seeds and Gardening.....	3	..	..
Education, 261, 262, 263.....	..	..	1
Education, 126; Methods.....	6	..	..
Education, 127; Practice Teaching.....	..	4-8	4-8
Electives, (English or Speech).....	..	5 or 5	..
	17	17	18

JUNIOR YEAR

(Animal Industry)

	Fall	Winter	Spring
Poultry Husb., 105; Management.....	--	3	--
Vet. Science, 10; Vet. Science El.....	4	--	--
An. Husb., 11; Meats.....	--	3	--
An. Husb., 101; Management.....	--	--	3
Zoology, 111; Genetics.....	5	--	--
An. Husb., 105; An. Breeding.....	--	--	5
An. Husb., 109; Sheep and Wool.....	--	3	--
Agron., 106; Soils.....	4	--	--
Ag. Econ.; Farm Admin.....	--	--	3
English, 126 or 127; Journalism.....	--	2	--
Bact. 109; Health.....	--	--	3
Psychology, 101, and 102 or 103.....	3	3	--
Education, 111 and 121.....	--	3	3
Electives.....	1	--	--
	<hr/> 17	<hr/> 17	<hr/> 17

SENIOR YEAR

(Animal Industry)

An. Husb., 120, 121; Seminar.....	2	--	--
Vet. Science, 107 or 118; Elective.....	--	3	--
Dairy Husb., 109 or 110; Productive.....	--	--	4
An. Husb., 103; Feeding.....	--	5	--
An. Husb., 104; Nutrition.....	--	--	5
An. Husb., 107; Adv. Judging.....	4	--	--
Agronomy, 117; Geography.....	--	2-5	--
Hort., 102; Elective.....	--	--	4
Marketing.....	3	--	--
Education, 261, or 62, or 63; Seminar.....	1	--	--
Education, 126; Methods.....	6	--	--
Education, 127; Training.....	--	4	4
Electives, (English).....	1	3	--
	<hr/> 17	<hr/> 17	<hr/> 17

JUNIOR YEAR (Horticulture)

	Fall	Winter	Spring
Hort., 151; Systematic Pomology.....	3-4	-	-
Hort., 3; Landscape Gardening.....	-	3	-
Hort., 101; Orchard Management.....	-	-	-
Hort., 104; Vegetable Production.....	-	3	-
Hort., 5; Bush, Cane & Vine Fruits.....	-	4	-
Hort., 115, 116; Greenhouse and Nursery Pract.....	-	1	1
Agron., 106; Soils.....	4	-	-
Agron., 117; Geography of Agriculture.....	-	2	-
Bot., 130; Plant Pathology.....	4	-	-
Zool., 14; Economics Entomology.....	-	4	-
Bact., 109; Public Health and Hygiene.....	-	-	3
Eng., 127; Journalism.....	-	-	2
Psychology, 101, 103; Edu. Psychology.....	3	-	3
Ed., 111, 121; Science of Ed. Org. and Adm.....	3	-	3
Education, 263; Seminar.....	-	-	1
	17	17	16

SENIOR YEAR (Horticulture)

Hort., 102; Adv. Orchard Management.....	5	-
Hort., 152; Commercial Pomology.....	3	-
Hort., 153, 154; Seminar.....	1	1
Hort., 110, 111, 112; Orchard Practice.....	1	1
Zool., 111; Genetics.....	5	-
Ag. Ec., 111; Marketing Ag'l Products.....	3	-
An. Husb., 103; Feeds and Feeding.....	5	-
Poultry, 105; Poultry Management.....	3	-
Dairy Husb., 110; Dairy Production.....	-	4
Ed., 126; Methods of Ag. Teaching.....	6	-
Ed., 127; Practice Teaching.....	-	8
English Electives.....	-	5
	18	18

THE SCHOOL OF ARTS AND SCIENCE

A. H. SAXER, Dean

Since its foundation the Utah State Agricultural College has offered strong courses in the Sciences and, to a less extent, courses in the Arts, to carry out the technical work of the Schools of Agriculture, Home Economics, Commerce, and Engineering, and to assure to these students a liberal education and training for efficient citizenship.

An efficient instructing force and complete modern equipment have been provided in the natural and physical sciences, as well as in English, Mathematics, History, and Languages. This make it possible to satisfy the growing demand for strong baccalaureate courses affording a broad general education in the earlier years, and admitting of specialization later. Such courses constitute the School of Arts and Science which, paralleling the other degree courses of the College, lead to the degree of Bachelor of Science.

ADMISSION

See statement of entrance requirements of the College on page 78.

Students who expect to become candidates for the Bachelor's degree are reminded that they should complete the requirements of the Junior College before they will be allowed to enter the Senior College. Read carefully the statements regarding "Junior College" and "Senior College" found on pages 80, 81.

GENERAL REQUIREMENTS FOR GRADUATION

Candidates for the Bachelor of Science Degree must meet in full all entrance requirements and present 180 quarter hours of College work as outlined below (exclusive of the required courses in Physical Education).

THE FOUR BASIC GROUPS

The candidate must include work in each of the four basic groups as follows:

Language Group: 18 hours (English, Modern Languages, Public Speaking). Must include English 10, 11, 12, unless excused by the English Department.

Social Science Group: 12 hours (History, Economics, Political Science Sociology).

Biological Science Group: 12 hours (Botany, Zoology, Public Health, Bacteriology, Physiology.)

Exact Science Group: 12 hours (Chemistry, Physics, Mathematics, Geology, Accounting 101, 102, 103).

MAJOR SUBJECT

Every student, at the time he enters the Senior College, must select a major subject in which at the time of graduation he must have completed at least 30 quarter hours of work. The student should consult with the professor in charge of his major work, and must secure his approval of the proposed combination of courses. (Read page 81).

In the school of Arts and Science, students may major in the following departments: Art, Bacteriology and Bio-Chemistry, Botany, Chemistry, English and Public Speaking, Geology, History, Mathematis, Modern Languages, Music, Physics, Physiology and Public Health, Political Science Zoology and Entomology.

MINOR SUBJECTS

From eighteen to thirty hours in some field of work closely related to the major subject will be chosen by the candidate with the advice and consent of the major department and the Dean of the School. (See page 81).

SENIOR COLLEGE WORK

Fifty-four (54) hours of Senior College work taken after the candidate has completed at least 90 hours of work must be presented by each candidate for the B. S. degree. See page 80 for a definition of Senior College Work.

RESIDENCE, SCHOLARSHIP, ETC.

See page 82 for requirements for graduation.

OUTLINE OF THE FOUR YEAR COURSE LEADING TO THE B. S. DEGREE

First Year		Second Year	
English 10, 11, 12.....	9	Language Group.....	9
Social Science.....	6	Social Science.....	6
*Biol. or Exact Sc.....	12	*Biol. or Exact Sc.....	12
Electives.....	18 to 24	Electives.....	18 to 24

The electives should include at least fifteen hours in the proposed major.

*Biological or Exact Science should be chosen so that the candidate has at least 12 hours in each of the two groups.

Junior and Senior Years

During the third and fourth year the student should complete his major and minor subjects and any related work prescribed by the Dean of Major Department. See page 81 for these requirements.

THE B. S. DEGREE IN ARTS AND SCIENCE WITH HIGH SCHOOL TEACHER'S RECOMMENDATION

It is a decided advantage to candidates for the High School Teacher's Certificate to hold the standard Bachelor's degree in Arts and Science if their major work is in this field. Arrangements have been made with the School of Education to provide candidates for the Bachelor of Science degree in Arts and Science with the necessary professional courses to qualify them for the Teacher's Professional High School Certificate. The High School Teacher's recommendation is given by the College, and the Professional High School Certificate is awarded by the State Board of Education, to those who include the following courses along with those presented for the B. S. degree:

The candidate must present 27 hours of Professional Educational subjects, which shall include Psychology 102 or 103, and Education 111, 115, and 121, or their equivalents. The candidate's Biological Science group must include Bacteriology 1, and Health Education 108; and the Social Science group shall include 5 credits of applied Sociology or Ethics, and 5 credits in Economics or Political Science.

Graduates of Standard Normal Courses, or those who have had one or more years of successful teaching experience, may have some of these requirements waived. Consult the Dean in regard to this matter.

Candidates for the Bachelor's degree with the High School Teacher's recommendation will be allowed to use the 27 hours of professional education credits as desirable related work mentioned in the requirement for the major subject. (See page 81).

OUTLINE OF THE FOUR YEAR COURSE LEADING TO THE B. S. DEGREE AND THE TEACHER'S PROFESSIONAL HIGH SCHOOL CERTIFICATE

The first two years of this course will be the same as for the B. S. degree previously outlined, except that the candidate should elect in the Social Science and the Biological Science groups the particular courses mentioned in the preceding paragraph.

Junior and Senior Years

During the third and fourth years the student should complete his major and minor work as outlined for the B. S. Degree, and for his related work include the following:

Junior Year

Psychology 101, and 102 or 103.....	6 hours
Education 111 and 121.....	6 hours

Senior Year

Training (Educ. 115).....	8 hours
Psychology or Education.....	7 hours

**PRE-MEDICAL CURRICULUM AND THE BACHELOR OF SCIENCE
DEGREE**

The Utah State Agricultural College is on the accredited list of the Association of American Universities, and also on the approved list of the Council on Medical Education. The College offers the following three-year preparatory course, which meets the requirements for entrance to practically all Class A medical schools in the United States.

Candidates desiring admission to the pre-medical course should offer the usual entrance subjects. Such candidates are strongly advised to present two or three units of some one foreign language, preferably French or German. This will materially reduce the amount of college work necessary in Language, and thereby increase the student's electives.

Candidates are reminded that the mere completion of a prescribed course of study does not guarantee admission to any Class A medical school. The better medical schools find it necessary to limit the number of students who are admitted to their classes, and they select only those applicants who show the most promise and who have the better preparation.

**PREMEDICAL COURSE BASED ON THE REQUIREMENTS OF
THE UNIVERSITY OF UTAH SCHOOL OF
MEDICINE**

FRESHMAN YEAR

Name of Course	Dept. No.	Quarter Credits		
		I	II	III
Freshman Composition.....	English, 10, 11, 12.....	3	3	3
Inorganic Chemistry.....	Chemistry 3, 4, 5.....	5	5	5
General Zoology.....	Zoology 3, 4.....	5	5	..
General Botany.....	Botany 1.....	..	..	5
Social Science.....	.....	3	3	3
Total.....	.....	16	16	16

SOPHOMORE YEAR

Name of Course	Dept. No.	Quarter Credits		
		I	II	III
Organic Chemistry.....	Chemistry 21, 22.....	5	5	--
Quantitative Analysis.....	Chemistry 102,103.....	--	--	5
First Year French or.....	French 1, 2, 3, or.....	--	--	--
First Year German.....	German 1, 2, 3.....	5	5	5
Mathematical Analysis.....	Math. 20, 21,	3	3	--
Elective.....	(English).....	3	3	6
Total.....		16	16	16

JUNIOR YEAR

General Physics.....	Physics 20, 21, 22.....	5	5	5
2nd Year French or German.....	French or German.....	3	3	3
General Psychology.....	Psychology 101, 104,	3	1	1
Comparative Anatomy.....	Zoology 113,114.....	--	4	4
*Elective.....		5	3	3
Total.....		16	16	16

*Should be taken to prepare for major work if student intends to remain and finish for his B. S. Degree.

BACHELOR OF SCIENCE DEGREE

Students who complete the foregoing three-year medical course, and register in a Class A medical school and successfully complete the first year of work prescribed in such school, will be awarded the Bachelor of Science degree in the School of Arts and Science at the Utah State Agricultural College, upon presenting satisfactory evidence that the work has been completed with a reasonably high standard of achievement. The foregoing schedule meets in full the requirements for admission to the medical school of the University of Utah. Students are urged to complete the first two years of their medical work at the State University School of Medicine.

FOUR YEAR COURSE

Students who expect to enter medical schools that require an academic degree for entrance, or who, for other reasons, desire the Bachelor of Science degree before entering upon their medical course, may complete the requirements for the degree of Bachelor of Science in the School of Arts and Science with a major in Chemistry or Zoology. Such students should consult with the professor in charge of their proposed major subject, and arrange for the additional work necessary to complete the requirements for the Bachelor of Science degree.

THE SCHOOL OF COMMERCE

W. L. WANLASS, Dean

The purpose of the School of Commerce is to give opportunity for liberal education with special emphasis upon the commercial and industrial phases of life. Persons who complete the commercial courses are prepared to assume leadership and responsibility in business and in various industries and professions. In order to meet the growing demands and to keep pace with recent tendencies in business education, students may major in accounting, business administration, merchandising, advertising and selling, secretarial work, economics, political science, sociology, agricultural economics and marketing.

For the professions of law and medicine the commercial courses afford excellent preparation. Graduates are prepared for positions as teachers in commercial schools. The demand for qualified teachers is greater than the supply, while many desirable positions as industrial managers are open to those who are qualified by training and experience. In the field of retail and wholesale merchandising are unlimited opportunities.

ADMISSION

See statement of entrance requirements of the College on page 78.

Students who expect to become candidates for the Bachelor's degree are reminded that they should complete the requirements of the Junior College before they will be allowed to enter the Senior College. Read carefully the statements regarding "Junior College" and "Senior College" found on pages 80, 81.

GENERAL REQUIREMENTS FOR GRADUATION

Candidates for the Bachelor of Science degree must meet in full all entrance requirements, and present 180 quarter hours of College work as outlined below (exclusive of the required courses in Physical Education).

THE FOUR BASIC GROUPS

The candidate must include work in each of the four basic groups as follows:

Language Group: 18 hours (English, Modern Languages, Public Speaking). Must include English 10, 11, 12, unless excused by the English Department.

Social Science Group: 12 hours (History, Economics, Political Science, Sociology).

Biological Science Group: 12 hours (Botany, Zoology, Public Health, Bacteriology, Physiology).

Exact Science Group: 12 hours (Chemistry, Physics, Mathematics, Geology, Accounting 101, 102, 103).

MAJOR SUBJECT

Every student, at the time he enters the Senior College, must select a major subject in which at the time of graduation he must have completed at least 30 quarter hours of work. The student should consult with the professor in charge of his major work, and must secure the approval of the proposed combination of courses. (Read page 81).

In the school of Commerce, students may major in the following subjects: Accounting, Business Administration, Merchandising, Advertising and Selling, Secretarial work, Economics, Political Science, Sociology, Agricultural Economics and Marketing.

MINOR SUBJECTS

From eighteen to thirty hours in some field of work closely related to the major subject will be chosen by the candidate with the advice and consent of the major department and the Dean of the School. (See page 81).

SENIOR COLLEGE WORK

Fifty-four (54) hours of Senior College work taken after the candidate has completed at least 90 hours of work must be presented by each candidate for the B. S. degree. See page 80 for a definition of Senior College Work.

RESIDENCE, SCHOLARSHIP, ETC.

See page 82 for requirements for graduation.

OUTLINE OF THE FOUR YEAR COURSE LEADING TO THE B. S. DEGREE

First Year		Second Year	
English 10, 11, 12.....	9	Language Group.....	9
Social Science.....	6	Social Science.....	6
*Biological or Exact Science.....	12	*Biological or Exact Science.....	12
Electives.....	18 to 24	Electives.....	18 to 24

The electives should include at least fifteen hours in the proposed major or minor subjects.

*Biological or Exact Science should be chosen so that the candidate has at least twelve hours in each of the two groups.

JUNIOR AND SENIOR YEARS

During the third and fourth years the student should complete his major and minor subjects and any related work prescribed by the Dean or Major Department. See page 81 for these requirements.

THE B. S. DEGREE IN COMMERCE WITH HIGH SCHOOL TEACHER'S RECOMMENDATION

It is a decided advantage to candidates for the High School Teacher's Certificate to hold the standard Bachelor's degree in Commerce, if their major work is in this field. Arrangements have been made with the School of Education to provide the candidates for the Bachelor of Science degree in Commerce with the necessary professional educational courses to qualify them for the teacher's Professional High School Certificate. The High School Teacher's recommendation is given by the College, and the Professional High School Certificate awarded by the State Board of Education, to those who include the following courses along with those presented for the B. S. degree:

The candidate must present twenty-seven hours of Professional Educational subjects which shall include Psychology 101 and either 102 or 103, and Education 111, 115, and 121, or their equivalents. The candidate's Biological Science group must include Bacteriology 1 and Health Education 108, and the Social Science group must include five credits of applied Sociology or Ethics and five credits in Economics or Political Science.

Graduates of standard Normal Courses, or those who have had one or more years of successful teaching experience, may have some of these requirements waived. Consult the Dean in regard to this matter.

Candidates for the Bachelor's Degree with the High School Teacher's recommendation will be allowed to use the twenty-seven hours of professional education credits as desirable related work.

OUTLINE OF THE FOUR YEAR COURSE LEADING TO THE B. S. DEGREE AND THE TEACHER'S PROFESSIONAL HIGH SCHOOL CERTIFICATE

The first two years of this course will be the same as for the B. S. degree previously outlined, except that the candidate should elect in the Social Science and Biological Science Groups the particular courses mentioned in the preceding paragraph.

JUNIOR AND SENIOR YEARS

During the third and fourth years the student should complete his major and minor work as outlined for the B. S. Degree and for his related work include the following:

Junior Year

Psychology 101, and 102 or 103.....	6 hours
Education 111 and 121	6 hours

Senior Year

Training (Educ. 115).....	8 hours
Psychology or Education.....	7 hours

THE SCHOOL OF EDUCATION

A. H. SAXER, Dean

The School of Education at the Utah State Agricultural College was authorized by enactment of the State Legislature in 1927, and has for its specific function the training of teachers for the various certificates and diplomas authorized by the State Board of Education.

TEACHER TRAINING

The entire public school system of the city of Logan from the lowest grades up through the Senior High School has been placed at the disposal of the College for teacher training purposes. This assures prospective teachers that they will receive their training in one of the best public school systems in the State.

WHITTIER TRAINING SCHOOL

The Whittier School, one of the regular school buildings of the Logan City School System, located a short distance from the College, has been placed entirely at the disposal of the School of Education for teacher training purposes. This school comprises the first six grades and the kindergarten. Each grade has been placed in charge of an experienced and skillful teacher, whose duties include supervision of practice teaching. In addition, an experienced supervisor in Elementary Education has been placed in charge of this work. Two-year Normal students will do their training in this building. The courses in Methods of Teaching Elementary subjects, and Elementary School Curriculum are taken by second-year students in connection with their teacher training work.

THE TWO-YEAR NORMAL CERTIFICATE

The two-year Normal Certificate will be awarded to all students who satisfactorily complete the course of study for this certificate outlined on page 57, provided that the last forty-five hours required for the certificate have been earned at this institution and that thirty of the last forty-five have been earned in residence. Graduates of the two-year normal course are awarded the grammar grade certificate, by the State Board of Education

SENIOR COLLEGE

Experience has shown that a large percentage of two-year normal graduates finally return to College to complete the work for the standard four-year College degree. Such students will find it distinctly to their advantage to have met the requirements for Senior College standing. This can be done

by a proper choice of the electives which are permitted in the normal course. (See requirements for Senior College on page 81). This will assure the student that he is prepared to complete the remaining two years of his college course, without handicap or delay, at any standard college or university, and in the particular field that he has chosen to do his major work.

THE FOUR YEAR COLLEGE COURSE

The four-year course in the School of Education leads to the degree Bachelor of Science in Education, and the Certificate in School Administration, the Certificate in Supervision, or the High School Teacher's Certificate. Teachers with experience who do not hold the Bachelor's degree and who wish to advance in their chosen field or prepare for administrative positions will find it to their advantage to qualify for the Bachelor's degree in the School of Education. Candidates preparing to teach in the field of Music, Art, Public Health, or Physical Education will register in the School of Education and choose their teaching major along these lines.

THE B. S. DEGREE WITH TEACHER'S RECOMMENDATION

It is a decided advantage to candidates for the High School certificate to hold the Standard Bachelor's degree in the particular School, (Agriculture, Home Economics, Commerce, Engineering or Arts and Sciences) in which their major work is chosen. Arrangements have been made with all of the different Schools within the Utah State Agricultural College to provide the candidates for their respective degrees with the necessary professional educational courses to qualify them to teach in these fields. Outlines of courses leading to the B. S. degree with the High School teacher's recommendation will be found under the respective schools.

ADMISSION

See statement of entrance requirements of the College on page 78

Candidates for the two-year normal certificates are reminded that they must present fifteen units of approved high school work, but they need not present all of the ten specified units unless they desire to qualify for Senior College standing at the same time. (See pages 80, 81).

GENERAL REQUIREMENTS FOR GRADUATION

Candidates for the Bachelor of Science degree must meet in full all entrance requirements and present 180 quarter hours of college work as outlined below (exclusive of the required courses in Physical Education).

THE FOUR BASIC GROUPS

The candidate must include work in each of the four basic groups as follows:

Language Group: 18 hours (English, Modern Languages, Public Speaking). Must include English 10, 11, 12, unless excused by the English Department.

Social Science Group: 12 hours (History, Economics, Political Science, Sociology). Must include five hours of applied Sociology or Ethics, and five hours of Political Science or Economics.

Biological Science Group: 12 hours (Botany, Zoology, Public Health, Bacteriology, Pyhsiology). Must include Bacteriology 1 and Health Education 108.

Exact Science Group: 12 hours (Chemistry, Physics, Mathematics, Geology, Accounting 101, 102, 103).

PROFESSIONAL EDUCATION SUBJECTS

The candidate must present 27 hours of Professional Educational subjects which shall include Psychology (102 or 103) and Education (111, 115 and 121,) or their equivalents. Graduates of Standard Normal Courses or those who have had successful teaching experience may have some of these requirements waived. Consult the Dean in regard to this matter.

TEACHING MAJORS

A teaching major of at least 30 hours shall be completed in one subject that is taught in High School, (Physical Education, Art, Music, etc.).

TEACHING MINOR

A second teaching major (or teaching minor) of at least 18 hours shall be chosen in some group of subjects closely related to the teaching major.

SENIOR COLLEGE WORK

Fifty-four (54) hours of Senior College work taken after the candidate has completed at least 90 hours of work must be presented by each candidate for the B. S. degree. (See page 80 for a definition of Senior College Work).

RESIDENCE, SCHOLARSHIP, ETC.

See page 82 for detailed requirements for graduation.

CERTIFICATES IN SCHOOL ADMINISTRATION AND IN SUPERVISION

The four-year course as outlined below leads to the degree of Bachelor of Science in Education, and the Professional High School certificate. Teachers with experience who desire to qualify for the Certificate in School Administration or Supervision must include History of Education, Educational Supervision, Educational Administration, Tests and Measurements, and special work in the Educational Seminar, depending upon the certificate desired.

OUTLINE OF COURSE FOR THE TWO YEAR NORMAL CERTIFICATE

First Year		Second Year	
Phys. Ed., 13, 14, 15, or		Physical Education.....	2
Phys. Ed., 1, 2, 3.....	3	Education 4, 5, 6, 41.....	12
Psychology 3.....	5	Training, Ed. 42.....	10
Health Education 14.....	4	*Exact or Biological Science.....	9
English Comp. 10, 11, 12.....	9	†Electives 14 to 20 hours.....	
Soc. Science Group.....	9	Total hours must be at least 95.	
*Exact or Biological Science			
Group.....	5		
†Electives 13 to 19 hours.....			

* At least five hours of exact science must be chosen during the two years.

†Suggested Electives. Physical Education, Community Recreation, Music, Art, English, Modern Languages, History, Home Economics, Agriculture.

OUTLINE OF THE FOUR YEAR COURSE LEADING TO THE B. S. DEGREE AND THE TEACHER'S PROFESSIONAL HIGH SCHOOL CERTIFICATE

First Year		Second Year	
English 10, 11, 12.....	9	Language Group.....	9
Social Science Group.....	6	Social Science.....	6
*Biol. or Exact Science.....	12	*Biol. or Exact Science.....	12
Electives	18 to 24	Electives	18 to 24

Note:—The Social Science Group should include at least five hours in Economics or Political Science, and five hours in applied Sociology or Ethics.

*Biological and Exact Science should be so chosen that the candidate has at least 12 hours in each group.

The Biological Science Group should include Bacteriology 1 and Health Education 108.

The Electives should include at least nine hours in the proposed teaching major and six hours in the minor. (See requirements for major and minor on page 81).

Third Year

*Educational Psychology 101, and 102 or 103.....	6
*Education 111 and 121.....	6
Teaching Major.....	9
Teaching Minor.....	6
Electives.....	18 to 24

Fourth Year

*Training Ed. (115).....	8
*Education or Psychology.....	7
Teaching Major.....	12
Teaching Minor.....	6
Electives.....	12 to 18

*Graduates of Standard Normal Courses and those who have taught successfully for one or more years may have some of these requirements waived.

Smith-Hughes Courses for teachers in Vocational High Schools.

See page 69, for Home Economics. See page 42 for Agriculture.

SCHOOL OF ENGINEERING

RAY B. WEST, Dean

It is the aim of this school to give the students a broad foundation in the fundamental principles of Engineering, together with sufficient knowledge of professional practice to enable them to apply these principles.

The School consists of three major divisions: Civil Engineering, Agricultural Engineering, and Mechanic Arts, each of which offers courses leading to a degree Bachelor of Science in its special field. Civil Engineering students may choose their major in Irrigation and Drainage, Highways, Structural Design, or Sanitation. Agricultural Engineering students may specialize in Irrigation and Drainage, Farm Machinery and Farm Power, or Farm Structures, by choosing the electives in these fields.

ADMISSION

See statement of entrance requirements of the College on page 78.

Prospective engineering students are advised that they will be somewhat handicapped if they do not present for entrance one and one-half units of algebra and one unit of geometry.

REQUIREMENTS FOR GRADUATION IN ENGINEERING

Candidates for the Bachelor of Science Degree in Civil Engineering or in Agricultural Engineering must complete any one of the prescribed courses listed on the following pages, together with two years of Military Science and two years of Physical Education unless officially excused from either or both. Each candidate for a degree in Engineering must prepare a satisfactory thesis on a problem to be assigned by the department in which he elects his major. See C. E. 198-199.

The degree of Master of Science will be awarded upon completion of any one of the optional courses listed below, and additional work as outlined on page 87 under the general requirements for the Master's Degree.

PRESCRIBED COURSES IN CIVIL ENGINEERING

The Freshman and Sophomore Years are common to all C. E. Courses, and the Freshman C. E. Course constitutes also the Freshman A. E. course.

*FRESHMAN

Subjects	Catalogue	F.	W.	S.	T.
Freshman Composition.....	Eng. 10,11-12.....	3	3	3	9
Algebra, Trig.....	Math. 30-45-46.....	5	5	5	15
General Chemistry.....	Chem. 1.....		5		5
Mechanical Drawing.....	C. E. 61.....	4	2		6
Descriptive Geometry.....	C. E. 63.....			4	4
Irrigation Practice.....	A. E. 12.....			3	3
Highway Construction.....	C. E. 21.....	3			3
Materials of Eng. and Shop Practice, C. E. 1.....		2	2	2	6
Total.....		17	17	17	51

**SOPHOMORE

Calculus.....	Math. 42-118-119.....	5	5	5	15
Heat, Light, Sound.....	Physics 20-21-22.....	5	5	5	15
Plane Surveying.....	C. E. 81-82.....	3		3	6
General Economics.....	Econ. 50-51-52.....	3	3	3	9
Eng'r. Geology.....	Geol. 10.....		5		5
Mech. Drawing.....	C. E. 62.....	1		1	2
Totals.....		17	18	17	52

*Prescribed courses leading to the degree Bachelor of Science in Agricultural Engineering, for the Sophomore, Junior, and Senior years, are announced on page 65.

**After completing the Sophomore year the student who is working towards the degree Bachelor of Science in Civil Engineering should elect a major in one of the four branches, Irrigation and Drainage, Highways, Structural, or Sanitary Engineering. Prescribed Junior and Senior year courses in each of these branches of Civil Engineering are announced on the following pages.

IRRIGATION AND DRAINAGE ENGINEERING

Freshman and Sophomore years common to all C. E. Courses.

JUNIORS

Subjects	Catalogue	F.	W.	S.	T.
Hydraulics.....	C. E. 141-142.....	3	3		6
App. Mech. & Str. of Mat'ls.....	C. E. 101-102-103.....	5	5	5	15
Reinforced Concrete.....	C. E. 106.....		5		5
Contracts and Specifications.....	C. E. 190.....	3			3
Heat and Power Mach.....	C. E. 196.....	4			4
Oper. & Main. of Irrig. Sys.....	C. E. 144.....		3		3
Hydrology.....	C. E. 143.....			3	3
Drainage Design.....	C. E. 145.....			5	5
Electives.....		3		3	6
Totals.....		18	16	16	50

SENIORS

Highway Engineering.....	C. E. 22-121-125.....	3	3	3	9
Design Irrig. Systems.....	C. E. 146-147.....	5	5		10
Hydroelectric Design.....	C. E. 148.....			5	5
Electrical Machinery.....	C. E. 197.....	3			3
Public Speaking.....	Speech.....	3			3
Irrig. Institutions.....	C. E. 149-150.....		3	3	6
Advanced Surveying.....	C. E. 181.....			5	5
Soils.....	Agron. 106.....	4			4
Thesis.....	C. E. 198-199.....		1	1	2
Electives.....			6		6
Totals.....		18	18	17	53

Electives should be chosen from the following:

Accounting
Agronomy
Business
Economics

Geology
Mathematics
Military Science
All branches of Engineering

HIGHWAY ENGINEERING

Freshman and Sophomore years common to all C. E. Courses

JUNIOR					
Subjects	Catalogue	F.	W.	S.	T.
Hydraulics.....	C. E. 141-142.....	3	3		6
App. Mech. & Str. of Mat'ls.....	C. E. 101-102-103.....	5	5	5	15
Reinforced Concrete.....	C. E. 106.....		5		5
Contracts and Specifications.....	C. E. 190.....	3			3
Heat and Power Mach.....	C. E. 196.....	4			4
Railroads.....	C. E. 191.....			3	3
Hydrology.....	C. E. 143.....			3	3
Advanced Surveying.....	C. E. 181.....			5	5
Electives.....	.....	3	3		6
Totals.....	.....	18	16	16	50

SENIOR					
Highway Engineering.....	C. E. 22-121-125.....	3	3	3	9
Design Irrig. Systems.....	C. E. 146-147.....	5	5		10
Hydroelectric Design.....	C. E. 148.....			5	5
Public Speaking.....	Speech.....	3			3
Electrical Machinery.....	C. E. 197.....	3			3
Highway Seminar.....	C. E. 122-123-124.....	1	1	1	3
Water Supply.....	C. E. 192.....	3			3
Sewerage Systems.....	C. E. 194.....		3		3
Disposal of Sewage.....	C. E. 193.....			3	3
Thesis.....	C. E. 198-199.....	1	1		2
Electives.....	.....		4	4	8
Totals.....	.....	18	17	17	52

Electives should be chosen from the following:

Accounting
Agronomy
Business
Economics

Geology
Mathematics
Military Science
All Branches of Engineering

STRUCTURAL ENGINEERING

Freshman and Sophomore years common to all C. E. Courses

JUNIOR

Subjects	Catalogue	F.	W.	S.	T.
Hydraulics.....	C. E. 141-142.....	3	3		6
App. Mech. & Str. of Matl's.....	C. E. 101-102-103.....	5	5	5	15
Reinforced Concrete.....	C. E. 106.....		5		5
Contracts and Specifications.....	C. E. 190.....	3			3
Heat and Power Mach.....	C. E. 196.....	4			4
Bridge Analysis.....	C. E. 110-111-112.....	3	3	3	9
Dams, Walls & Foundations.....	C. E. 107.....			3	3
Advanced Surveying.....	C. E. 181.....			5	5
Totals.....		18	16	16	50

SENIOR

Highway Engineering.....	C. E. 121-125.....		3	3	6
Design Irrig. Systems.....	C. E. 146-147.....	5	5		10
Hydroelectric Design.....	C. E. 148.....			5	5
Public Speaking.....	Speech.....	3			3
Electrical Machinery.....	C. E. 197.....	3			3
Bridge Design.....	C. E. 113-114-115.....	3	3	3	9
Hydrology.....	C. E. 143.....			3	3
Thesis.....	C. E. 198-199.....	1	1		2
Electives.....		3	6	3	12
Totals.....		18	18	17	53

Electives should be chosen from the following:

Accounting
Agronomy
Business
Economics

Geology
Mathematics
Military Science
All branches of Engineering

SANITARY ENGINEERING

Freshman and Sophomore years common to all C. E. Courses

JUNIOR					
Subjects	Catalogue	F.	W.	S.	T.
Hydraulics.....	C. E. 141-142.....	3	3		6
App. Mech. & Str. of Mat'ls.....	C. E. 101-102-103.....	5	5	5	15
Reinforced Concrete.....	C. E. 106.....		5		5
Contracts and Spec.....	C. E. 190.....	3			3
Heat and Power Mach.....	C. E. 196.....	4			4
Bacteriology.....	Bact. 1-2-3.....	3	2	5	10
Hydrology.....	C. E. 143.....			3	3
Advanced Surveying.....	C. E. 181.....			5	5
Totals.....		18	15	18	51

SENIOR					
Highway Engr.....	C. E. 121-125.....		3	3	6
Design Irrig. Systems.....	C. E. 146-147.....	5	5		10
Hydroelectric Design.....	C. E. 148.....			5	5
Public Speaking.....	Speech.....	3			3
Electrical Machinery.....	C. E. 197.....	3			3
Water Supply.....	C. E. 192.....	3			3
Sewerage Systems.....	C. E. 194.....		3		3
Disposal of Sewage.....	C. E. 193.....			3	3
Public Health.....	116-108-109.....	3	3	3	9
Thesis.....	C. E. 198-199.....	1	1		2
Electives.....			3	3	6
Totals.....		18	18	17	53

Electives should be chosen from the following:

Accounting
Agronomy
Business
Economics

Geology
Mathematics
Military Science
All Branches of Engineering

PRESCRIBED COURSE IN AGRICULTURE ENGINEERING

See Page 60 for Freshman year common to all Engineering Courses.

SOPHOMORE YEAR

Subjects	Catalogue	F.	W.	S.	T.
Calculus.....	Math. 47-118-119.....	5	5	5	15
Heat, Light, Sound.....	Physics 20-21-22.....	5	5	5	15
Plane Surveying.....	A. E. 1-2.....	3		3	6
General Economics.....	Econ. 50-51-52.....	3	3	3	9
General Crops.....	Agron. 101.....		4		4
Totals.....		16	17	16	49

JUNIOR YEAR

Hydraulics.....	C. E. 141-142.....	3	3		6
App. Mech. & Str. of Mat'ls.....	C. E. 101-102-103.....	5	5	5	15
Ag'l Economics.....	Ag. Ec. 101-102-106.....	3	3	3	9
Contracts and Spec.....	C. E. 190.....	3			3
Reinforced Concrete.....	C. E. 106.....		5		5
Farm Machinery.....	A. E. 15.....			3	3
Sewage Disposal.....	C. E. 193.....			3	3
Electives.....		3		3	6
Totals.....		17	16	17	50

SENIOR YEAR

Highway Transportation.....	C. E. 125.....			3	3
Irrig. Design.....	C. E. 146-147.....	5	5		10
Op. and Maint. Irr. Systems.....	C. E. 144.....		3		3
Adv. Surveying.....	C. E. 181.....			5	5
Soils.....	Agron. 106.....	4			4
Farm Structures.....	A. E. 6.....		3		3
Farm Motors.....	A. E. 13.....	3			3
Public Speaking.....	Speech.....			3	3
Electives.....		4	6	6	16
Totals.....		16	17	17	50

ELECTIVES—

- | | |
|--|---|
| <ol style="list-style-type: none"> 1. Planning Farm Structures and Homes. 2. House Building and Contracting. | <ol style="list-style-type: none"> 3. Irrigation Institutions. 4. Design Drainage Systems. 5. Shop Courses and Agricultural Courses on Approval. |
|--|---|

MECHANIC ARTS

This division offers a four-year course leading to the degree of Bachelor of Science in Mechanic Arts, with the object of training efficient auto mechanics and garage foremen, auto electricians, machine shop foremen and High School shop teachers. It lays an Engineering and Mechanical foundation for building and contracting. Two years' trade courses in Machine Work, Forging, Woodwork, Auto Mechanics, and Auto Ignition are provided for those who wish to become proficient tradesmen in these lines.

The shops are modern and well equipped, and ample floor space is provided.

REQUIREMENTS FOR GRADUATION

Candidates for the degree Bachelor of Science in Mechanic Arts must meet in full all college entrance requirements and present 180 quarter hours of college work as outlined below, exclusive of the required courses in Physical Education.

THE FOUR BASIC GROUPS

The candidate must present the following number of quarter hours of work in each of the basic groups: Language Group, 12 hours, (must include English, 10, 11, 12); Social Science Group, 9 hours; Biological Science Group, 9 hours; Exact Science Group, 18 hours; Special Group, 18 hours; Special Technical Group, 30 hours.

MAJOR AND MINOR

A major of 30 hours and a minor of 18 hours are required. For further explanation of these see page 81. The Mechanic Arts courses from which the Major, Minor, and Special Technical groups must be selected are announced under Courses of Instruction.

THE SCHOOL OF HOME ECONOMICS

----- Dean

The school of Home Economics is organized for study along the lines essential to successful home life in modern society. The activities of the present-day household include the promotion of the health and comfort of its members through proper food, clothing and shelter, the fostering of satisfactory family relationships, and the functioning of the family group as an important part of the community.

In keeping with the newer trend of Home Economics, which stresses the importance of a knowledge of child study, courses are now being offered in the physical care of the mother and child, nutrition of children, clothing of children, child psychology, the relation of the child to the family group and child development.

Women who graduate from the School of Home Economics are fitted for various lines of work, including homemaking, teaching, and extension service. The training given furnishes also a basis for specialization leading to positions in hospitals, institutions of various kinds and in the commercial field.

ADMISSION

See statement of entrance requirements of the College on page 78.

GENERAL REQUIREMENTS FOR GRADUATION

Candidates for the Bachelor of Science Degree must meet in full all entrance requirements and present 180 quarter hours of college work as outlined below (exclusive of the required courses in Physical Education.)

THE FOUR BASIC GROUPS:

Candidates must present twelve hours from each of the following three basic groups of work, and eighteen hours from the fourth basic group:

Social Science Group: (History, Economics, Political Science, Sociology).

Biological Science Group: (Botany, Zoology, Bacteriology, Public Health, Physiology.)

Exact Science Group: Chemistry, Physics, Mathematics, Accounting 101, 102, 103.)

Language Group: (English, Modern Languages, or Public Speaking). Must include English 10, 11, 12, unless excused by the English Department.

MAJOR SUBJECTS

Students in the School of Home Economics may major in Foods, Textiles, or Household Administration. The major should be selected and should receive the approval of the professor in charge of the Department concerned prior to entering Senior College. (See page 81).

MINOR SUBJECT

From 18 to 30 hours of work in some field closely related to the major subject will be chosen by the candidate with the advice and consent of the Dean of the School and the Head of the Department. (See page 81.)

SENIOR COLLEGE WORK

Fifty-four (54) hours of Senior College work taken after the candidate has completed at least 96 hours of work must be presented by each candidate for the B. S.* degree. (See page 80 for a definition of Senior College work.)

SUGGESTED OUTLINE OF THE FOUR YEAR COURSE LEADING TO THE B. S. DEGREE IN HOME ECONOMICS

Freshman Year		Sophomore Year	
	Credits		Credits
Language Group.....	9	Language Group.....	9
Biological Science.....	12	Social Science.....	12
One or more Home Economics courses and		Exact Science.....	12
*Electives to make up.....	45	One or more Home Economics courses and	
		Electives to make up.....	45

*The electives should include at least one course in the proposed major and one course in the minor subject. Any courses which are prerequisites to the major or minor subjects should be included among these electives.

Junior and Senior Year

During the third and fourth years the student should complete her major and minor and any related work prescribed by the Dean or Major Department. (See page 81 for these requirements).

THE B. S. DEGREE IN HOME ECONOMICS WITH HIGH SCHOOL TEACHER'S RECOMMENDATION

Candidates for the High School Teacher's Certificate in Food, Textiles, or Household Administration will find it a decided advantage to hold the standard Bachelor's Degree in Home Economics. Arrangements have been made with the School of Education to provide candidates for the Bachelor of Science degree in Home Economics with the necessary professional training to qualify them for the teacher's Professional High School Certificate. The High School Teacher's recommendation is given by the College, and the Professional High School Certificate is awarded by the State Board of Education to those who include the following courses along with those presented for the B. S. Degree.

27 hours of Professional Educational subjects which shall include Psychology 101 and either 102 or 103, and Education 111, 121, and 122 or their equivalents. The candidate's Biological Science group must include Bacteriology 1, and Health Education 108. 5 hours of Applied Sociology or Ethics must be included in the Social Science Group in addition to 5 hours of Economics or Political Science. Graduates of Standard Normal Courses or those who have had one or more years of successful teaching experience may have some of these requirements waived. Consult the Dean in regard to this matter.

OUTLINE OF THE FOUR YEAR COURSE LEADING TO THE B. S. DEGREE AND SMITH-HUGHES TEACHER'S CERTIFICATE *FRESHMAN YEAR

	Fall	Winter	Spring
Foods 20, 21.....	5	5	..
Textiles 10, 11.....	..	3	3
Art 1, 2, 3.....	2	2	2
Home Administration 10.....	2	..	..
English 10, 11, 12.....	3	3	3
Zoology or Bacteriology.....	..	..	5
Sociology 5.....	..	3	..
Electives.....	3	..	3
	—	—	—
	15	16	16

*Physical Education required of all girls during the first two years.

SOPHOMORE YEAR

	Fall	Winter	Spring
Textiles 20, 21, 30.....	3	3	3
Home Administration 25, 20, 21.....	2	3	3
Economics 51	5	--	--
Foods 30.....	--	--	3
Chemistry 1, 26.....	--	5	5
Physics 1.....	5	--	--
Electives (Language Group).....	1	6	3
	<hr/>	<hr/>	<hr/>
	16	17	17

JUNIOR YEAR

Foods 105, 106, 107.....	3	3	3
Textiles 105, 115, 125.....	3	3	3
Sociology.....	3	--	--
Education 121.....	--	3	--
Bacteriology 108.....	--	3	--
Home Administration 125, 149.....	--	3	2
Psychology 101, 104, 102.....	3	1	3
Education 119.....	--	--	3
Electives.....	5	1	3
	<hr/>	<hr/>	<hr/>
	17	17	17

SENIOR YEAR

Foods 140, 141, 143, 192.....	4	4	4
Textiles 160, 161, 162.....	2	2	2
Home Administration 150, 122, 123.....	2	3	3
Home Administration 150.....	--	--	3
Education 120, 122.....	3	5	--
Education 111, 121.....	3	--	3
Electives	3	3	2
	<hr/>	<hr/>	<hr/>
	17	17	17

THE SUMMER SESSION

For over twenty years the College has conducted Summer Sessions as an important part of its curriculum. Since 1924 the curriculum has been materially enlarged and enriched and a very efficient lecture course was established. The purpose of this large educational undertaking is to bring to Logan, with its delightful summer climate and its many recreational features, each year, a number of the leading educators of the nation, and thus to build, in the intermountain west, a summer school of wide influence.

During the Summer session nearly all of the departments of the College are represented, the courses of instruction being arranged to meet the particular need of Summer students.

The courses offered in Education, Psychology, and related departments make it possible for the student to meet all of the requirements for Utah certification in School Administration and Supervision for High Schools, Junior High Schools, and Grammar Schools; also the subjects offered will meet most of the requirements for certification in surrounding states.

The departments of Botany, Geology, and Zoology are especially emphasized because of the location of the School. Cache Valley, Logan Canyon, and nearby Bear Lake afford unparalleled opportunities for the study of plant and animal life and geological formations, while Bear River Bay near Brigham City, only thirty-five miles from the College campus, affords possibly as fine an opportunity as can be found anywhere in America for the study of water fowl and fish life.

Students desiring to make up conditions or prepare for advanced work are given all the assistance possible. The entire equipment of the Institution is available, and every care is taken to preserve the standard and the spirit of the College.

GRADUATE CREDIT

Summer quarter students are allowed six years in which to satisfy requirements for the Master's degree. This makes it possible to secure this degree without giving up present teaching employment. Those who expect to register for work leading to this degree should submit their credits to the Dean of the Faculty several weeks in advance of registration and indicate the subject in which the student wishes to major. This will make it possible to have the course of study approved at the time of registration.

AGRICULTURAL EXPERIMENT STATION

P. V. CARDON, Director

The establishment of Land-grant colleges, under provisions of the First Morrill Act (1862), soon led to the development of a national sentiment favoring the creation of agricultural experiment stations in the various states and territories of the union, to supplement the educational functions of the colleges.

In keeping with this sentiment Congress, in 1887, passed the Hatch Act providing for the establishment in each state and territory, under the direction of the Land-grant college, an experiment station "to aid in acquiring and diffusing among the people of the United States useful and practical information on subjects connected with agriculture, and to promote scientific investigation and experiment respecting the principles and applications of agricultural science." The Hatch Act appropriated \$15,000 per annum to each state.

Supplementing the Hatch Act, another act known as the Adams Act, was passed by the National Congress in 1906. Under the provisions of this act, an additional sum of \$15,000 per annum was appropriated for the use of each state experiment station "to be applied only to paying the necessary expenses of conducting original researches or experiments bearing directly on the agricultural industry of the United States, having due regard to the varying conditions and needs of the respective states and territories."

For the still more complete endowment of the agricultural experiment stations Congress, in 1925, passed the Purnell Act, which gave to each station the sum of \$20,000 per annum with an addition of \$10,000 each year thereafter until, for the fiscal year ending June 30, 1929, the total sum of \$60,000 shall be available, and shall continue to be available each year indefinitely. "The funds appropriated pursuant to this act shall be applied only to paying the necessary expenses of conducting investigations or making experiments bearing directly on the production, manufacture, preparation, use, distribution, and marketing of agricultural products and including such scientific researches as have for their purpose the establishment and maintenance of a permanent and efficient agricultural industry, and such economic and sociological investigations as have for their purpose the development and improvement of the rural home and rural life, and for printing and disseminating the results of said researches."

In addition to the Federal funds appropriated for agricultural research under the provisions of the Hatch, Adams, and Purnell Acts, the state agricul-

tural experiment stations receive money appropriated by their respective state legislatures. The amount of money coming from the state treasury is governed in each case by the relative importance of agriculture within the state and the urgency of the agricultural problems demanding solution. Hence, while the Federal funds are uniform in size in all states, the total funds differ widely, owing to the variation in state appropriations.

In 1889, two years after the Hatch Act was passed, the State of Utah, taking advantage of the provisions of that act, established the Utah Agricultural Experiment Station as a major division of the Utah State Agricultural College. Since its establishment, the Station has functioned as an active investigational unit, steadily extending its investigations into an ever-broadening field of research.

The research work is conducted on a project basis, each project, after approval, being assigned to one or more of the researchers who make up the Station Staff. While most of the projects now in progress are wholly under the supervision of state workers, a few projects are conducted cooperatively with various Bureaus of the U. S. Department of Agriculture, which assigns additional workers to the respective fields of investigation.

The present scope of Station research work is indicated by the titles of some of the projects listed under different departments, as follows:

Agronomy: Dry-farming, Irrigation Practice, Soil Moisture, Soil Fertility, Plant Breeding, Crop Rotations, Weed Control, Miscellaneous Field Studies, and Fertilizer Experiments.

Animal Husbandry: Hog Rations, Beef Cattle Production, Wool and Sheep Management, and Production Costs in Dairying.

Bacteriology and Chemistry: Factors Influencing Bacterial Activities of the Soil, Composition of the Irrigation Water of the Intermountain Region, Changes Occurring in Food During Storage, and Permanent Fertility Studies.

Entomology: The Chalcis-Fly in Alfalfa-Seed, the Sugar-Beet Leaf-hopper, and Miscellaneous Insects, including the Fruit-Tree Leaf Roller, Pear Leaf Blister Mite, Sugar-Beet Maggot, and Squash Bugs.

Geology: Underground Water Development.

Economics and Sociology: Influence of Cropping Systems on Production Costs, An Economic Survey of Cattle and Sheep Ranching in Utah, the Marketing of Utah Farm Products, Price Studies of Utah Farm Products, and Studies of Utah Village Life.

Forestry: Preservative Treatment of Natural Woods for Fence Posts.

Home Economics: Food Habits of Utah Farm Families.

Horticulture: A Horticultural Survey, Ornamental Trees and Shrubs, Fruit Varieties, Breeding Horticultural Plants, Orchard Management, and Truck Crop Production, Cherry Pollination Studies, and Orchard Rootstocks Investigations.

Human Nutrition: The Physical Curd Character of Milk and its Probable Relation to Infant Nutrition.

Irrigation and Drainage: Pumping for Irrigation, Relative Elevation of the Water-Table and the Plane of Saturation in Fine-Textured Soils, Snow Surveys, Flood and Gravel Control, and Consolidation of Irrigation Companies.

Physics: Fundamental Soil Moisture Constants.

Plant Pathology: Potato Diseases, Canning Crop Diseases, Plant Disease Survey, Chlorosis, and the Psyllid Yellows of the Potato.

Poultry Husbandry: Breeding for Egg Production, Incubation Problems, Poultry Feeding, and the Utah Intermountain Egg-Laying Contest.

Range Management: Range Survey and Range Reseeding.

Soils: Action of Alkali and Soil Moisture.

Veterinary Science: Effects of Sugar-Beets and Their By-Products when used for Feeding Livestock, and Miscellaneous Veterinary Science Investigations, including Diseases of Dairy Cattle, Sheep, and Poultry, and the Effects of Poisonous Plants on the Range.

Much of the research work conducted in furtherance of the foregoing projects, and others, is carried on in the various laboratories and greenhouses located on the college campus, but many phases of the work must of necessity be conducted on the farms and open ranges of Utah. A number of studies are made each year in cooperation with stockmen, farmers, and farm women and many more are made on the substations located in various parts of the state.

The educational importance of the Experiment Station is emphasized by the fact that most members of the Station Staff are also members of the regular college faculty, which makes it possible for students to receive first-hand information regarding the methods employed in research, and to familiar-

ize themselves with the results recorded each year from the researches in progress. Under proper arrangements, also students are given access to the Station Library; and Staff members are always willing to direct students who are interested in any of the several branches of science.

For students especially prepared to help in research, and who at the same time wish to continue their studies in the college, the Experiment Station offers each year a limited number of research graduate assistantships. These graduate assistantships allow the students to whom they are granted to earn \$500 during the ten months of the school year, in addition to thirty hours of graduate credit.

THE EXTENSION SERVICE

WILLIAM PETERSON, Director

The Division of Extension Service is the joint representative of the United States Department of Agriculture and the Utah State Agricultural College. It is charged under federal legislation (Smith Lever Act, May 8, 1914) and under State legislation (Sections 5290 to 5296, 1917) with the task of disseminating information that shall further the interests of agriculture and rural living.

The Extension Service thus becomes an official carrier of experimental and research information from the federal department and from the state college to the rural people. It assists also in translating scientific information into good farm or home practices by conducting tests or demonstrations into methods of application under farm or home conditions. Much effort is given to stimulating individuals and organized groups to try out and carry on practices that have been tested and are known to be good.

The Extension Service organization consists of State and of county staff members. The state includes a director, an assistant director, supervisors, and subject-matter specialists; the county staff consists of one or more county agents in each county that fulfills requirements necessary to secure the services of an agent.

The Extension Service works preferably with existing rural organizations as a means of reaching the largest possible number of people. Individuals may receive attention, however, upon personal requests. Assistance is given to men, women, boys and girls in problems pertaining to Agriculture and to Home Economics including Project Leadership and Organization Methods. Problems that are of common interest to groups are given in project form, and followed up progressively until satisfactory solutions are found and approved practices established. The State Specialists work with the County Agricultural Agents and the County Home Demonstration Agents in assembling information and determining methods of solution. Voluntary Project Leaders are trained by Specialists and County Agents to assist in organizing and leading project groups. Usually the selection of Project Leaders is made in cooperation with a sponsoring organization. State and County special short-course training is provided annually for these leaders. The State training courses are held at the college and are more intensive than those of the county.

CORRESPONDENCE-STUDY

The Utah State Agricultural College was one of the first educational institutions of the inter-mountain region to establish a Correspondence-study department. Correspondence-study furnishes an excellent opportunity for systematic instruction to the student of high school or of college grade; also the teacher, the professional or business man, the club woman, the project leader in extension work—to all who cannot leave home.

Students must be nineteen years of age, or submit fifteen units of high school work, or be graduates of a high school for admission to correspondence-study courses of college grade.

One-fifth of the credits necessary for a degree may be earned through this department.

Courses offered:

1. Collegiate studies. A wide variety of subjects are offered in the following departments: Agricultural Economics and Marketing, Agronomy, Animal Husbandry, including Poultry and Dairying, Art, Business Administration and Accounting, Economics and Sociology, Education, English, Entomology, Geology, History, Horticulture, Irrigation and Drainage, Mathematics, Modern Languages, Psychology, Mechanic Arts, Public Health, and Bacteriology.

2. Practical studies designed to advance men and women in a given occupation.

3. Preparatory, or High School Studies for those who have been unable to complete their high school courses and who wish to satisfy the entrance requirements of the college; also for those who wish to fit themselves for careers where the equivalent of a high school education is necessary.

In isolated communities a good high school education cannot be obtained without leaving home, the expense of which many people cannot assume; there are also those even in favored communities who, on account of the necessity of bread winning, are unable to leave their employment for nine or ten months of the year. Both of these classes may now receive a high school education.

4. Reading Courses for the housewife; short, practical, non-credit courses in sanitation, home management, home decoration, home care of the sick, etc.

5. Reading Courses for the farmer; short, practical, non-credit courses in agronomy, animal husbandry, and horticulture.

6. Reading Courses for the business man; short, practical non-credit courses in analysis of retail merchandising, retail store accounting, book-keeping for the cooperative grain elevators and creameries.

A special catalogue of correspondence-study courses will be mailed on request.

ADMISSION

Entrance to the Freshman class is based upon graduation from an accredited high school, or upon the presentation of fifteen approved high school units of work, or upon examination, in case of students of special training not obtained in high school. Prospective students are strongly urged to send a record of their credits to the Registrar at least two weeks before the opening of school. Students who expect to become candidates for the Bachelor's degree from any of the Schools of the College should include (among those units presented for entrance), ten units in the following five groups: English, Mathematics, Social Science, Natural Science, and Modern Languages, of which at least seven must be as follows:

English.....	three units
Algebra.....	one unit
Geometry.....	one unit
Social Science.....	one unit
Natural Science.....	one unit
(Requiring laboratory work)	

Students may not receive more than Sophomore standing until the foregoing requirements have been met.

When a deficiency exists; that is, when a student has fifteen units of high school work but lacks one or more of the units specified above, the student will be required to complete nine quarter hours of college work for each unit in which he is deficient, in addition to the regular group requirement in that field.

A student who has less than fifteen units of high school work cannot enter unless he is beyond high school age, in which case he must register as a vocational student (see below.)

Physical Education and Military Drill will not be accepted in the fifteen approved units.

VOCATIONAL STUDENTS

Persons 19 years of age, or over, who have less than 15 units of high school work and who have not been in attendance at any high school within one year preceding the time of application for admission to the Utah State Agricultural College, may, at the discretion of the Entrance Committee, be admitted as vocational students. Such persons are not candidates for a degree, and have no collegiate rating. They may register for any courses which their previous training or experience will enable them to carry successfully, but only after consultation with the instructors concerned, and their written approval.

If the applicant has been in attendance at a high school within one year preceding the time of application for admission to the Utah State Agricultural College, his application will not be considered unless it is accompanied by a statement from the superintendent of the high school attended, to the effect that the applicant is a person worthy of admission to the College, and that in his opinion the applicant could be better served at the Utah State Agricultural College than at the high school concerned.

Such persons may receive college standing and become candidates for a degree:

a. By using the credits obtained while vocational students to satisfy college entrance requirements. In such cases 12 quarter hours will be taken for each deficient high school unit.

b. By passing written entrance examinations. These examinations will be offered the third day of each quarter. The questions will be prepared, and papers graded, by the departments concerned. The examinations will be conducted by the Entrance Committee.

No credits obtained prior to the quarter in which college standing was established can be used toward a degree.

Advanced Standing: The College does not grant credit for excess high school work. Advanced standing for work done in some other accredited college after the completion of 15 units of high school work may be granted by the Committee on Advanced Standing, provided the student presents satisfactory evidence that the work offered is equivalent to the work for which he wishes to substitute it.

Class Standing. Forty hours (40) of approved college work, in addition to the prescribed entrance requirements, are required for Sophomore rank; ninety hours and Senior College Standing for Junior rank (See page 81) and one hundred thirty hours and Senior College Standing for Senior rank. The foregoing requirements are to be exclusive of the required courses in Physical Education.

Registration: The Fall quarter opens on Friday, September 20, on which date entrance examinations will be given for those requesting them; also, special instructions and entertainment will be furnished for Freshmen. Freshmen will register on Saturday, September 21, former students will register on Monday, September 23. The Winter quarter begins on Saturday, December 14; the Spring quarter opens on Saturday, March 15; the Summer session on Monday, June 9. It is of decided advantage to register upon the

A fee of one dollar per day will be charged those who register late. In no case, however, will the fee for late registration exceed five dollars.

opening date. The amount of work for which any student will be allowed to register will be reduced by one and one-half credit hours for each week or fraction thereof that the student is late in registering.

Fifteen Hours, exclusive of Physical Education, is the normal registration for any one quarter. A student may, however, with the consent of the Dean, register for seventeen hours.

Quarter Hours. A quarter hour credit is the credit given for one hour of lecture or three hours of laboratory work each week for twelve weeks.

The collegiate work of the Institution is divided into two divisions: Junior College, and Senior College. Courses numbered 1 to 99 inclusive, are Junior College courses. Those listed from 100 to 199, inclusive, are Senior College courses. All courses with the numbers 200 and over are Graduate courses.

Qualified students may enter courses in any quarter, unless a statement to the contrary appears in the description of the courses.

THE JUNIOR COLLEGE

The work of the Junior College comprises the studies of the Freshman and Sophomore years. In this College it is expected that the student, in addition to fulfilling the prerequisites for the major work upon which he will concentrate in the upper division, will make an effort to establish a basis for that breadth of culture which will give him a realization of the methods and the results of some of the more important types of intellectual endeavor, and a mental perspective that will aid him in reaching sound judgments. The Junior College requirements are designed to provide in some degree for the accomplishment of this purpose, without unduly limiting the student's opportunity to satisfy his individual tastes and preferences.

Students who expect to become candidates for advanced degrees either in Arts and Science or in the professional schools in this institution or in other leading colleges of the country should plan their courses with great care through consultation with their deans, in order to insure proper foundation for advanced work.

During the first two years the student is expected to completely satisfy the entrance requirements (see page 78) and complete 96 hours, which shall include 54 hours of work in four basic groups as follows:

Language Group: 18 hours (English, Modern Languages or Public Speaking). Must include English 10, 11, 12 unless excused by the English Department.

Social Science Group: 12 hours (History, Economics, Political Science, Sociology).

Biological Science Group: 12 hours (Botany, Zoology, Entomology, Public Health, Bacteriology, Physiology).

Exact Science Group: 12 hours (Chemistry, Physics, Mathematics, Geology, Accounting 101, 102, 103, when preceded by the Mathematics prerequisite).

In addition, the 96 hours should include at least 15 hours of work in one subject, or school. This work is to serve as a beginning for his major work which is to be continued in the Senior College. The student must fulfill all the requirements in Physical Education and Military Science. Junior College students will not be allowed to enter Senior College courses except in meritorious cases, and upon formal application approved by both the dean and the instructor of the course.

SENIOR COLLEGE

Only such students as have completed the Junior College requirements may be registered in the Senior College.

Graduates of standard normal schools and junior colleges and students from other colleges who present at least 90 hours of college work exclusive of required courses in Physical Education, may be registered in the senior college, even though they lack some of the group requirements of the junior college, provided they register so as to remove these deficiencies within two quarters of the time of registration.

Major Subject

The student must select a major subject upon entering the senior college. The Dean will assign the student to the professor in charge of this major who will register the student during his junior and senior years and act as his adviser.

The Major Department has the authority to prescribe not less than thirty, nor more than fifty hours of work in the Major Subject (exclusive of any courses which may have been used to satisfy Junior College requirements in any of the four basic groups). The Major Department and the Dean shall also prescribe such other related courses as may be considered desirable, provided always that the students' free electives may not be reduced below thirty-six hours.

Minor Subjects

A minor subject or group of related subjects consisting of from eighteen to thirty hours of work closely related or basic to the major must be selected by the student and approved by the Dean of the School and the Major Department.

GRADUATION

REQUIREMENTS FOR THE DEGREE OF BACHELOR OF SCIENCE

The College confers the Degree of Bachelor of Science in Agriculture, Arts and Science, Agricultural Engineering, Civil Engineering, Commerce and Business Administration, Home Economics, Education, or Mechanic Arts upon students who meet the requirements specified herewith:

GENERAL REQUIREMENTS

1. Six quarters work in Physical Education by men and women, provided that candidates who are officially excused from physical education present one credit of other work for each quarter that they have been excused.

2. Six quarters of work in Military Science for men unless officially excused from this requirement.

3. One hundred eighty credits of collegiate work, exclusive of the required courses in Physical Education.

4. Fifty-four hours of Senior College work taken after the candidate has presented at least ninety college credits, in addition to the required courses in Physical Education or their substitutes.

5. The completion of a major, a minor, and related work as outlined under Senior College. (See page 81).

6. The completion of required work in the four basic groups as outlined under Junior College. (See page 80).

Paragraphs 5 and 6 above do not apply to students who are pursuing a prescribed course of study such as in Engineering, Pre-medical work, Forestry and Smith-Hughes Teacher Training courses.

7. Candidates must have been in residence at the Utah State Agricultural College during three full quarters. During this period the candidate must have obtained at least 45 resident credits. The last 45 credits presented for the degree must have been earned in the College, and of these 45, at least 30 must have been earned in residence. The residence requirement may be satisfied by residence Summer School work.

8. An average grade of "C" or higher; credits of "D" grade not to exceed one-fifth of those used toward graduation; and no credit for courses having a grade lower than "D".

9. Written application to graduate, filed with the Graduation Committee about February 1st, containing information requested. A special fee of one dollar will be charged those applying later than March 1st.

10. Recommendation for graduation in writing by:

- (a) The Professor in charge of the major subject.
- (b) The Dean of the school in which the major work is done, and
- (c) The Committee on Graduation.

11. The candidates must be of good moral character and must have discharged all college fees.

12. Attendance in person at the Commencement and Baccalaureate exercises at which the candidate expects to secure the degree, unless excused in writing by the Graduation Committee for very urgent reasons.

The College reserves the right to change at any time the requirements for graduation, and every candidate for a degree shall be held to a compliance with such changes, as far as the uncompleted portion of his course is affected.

Students who do not graduate with the class with which they entered are held to the requirements, including entrance, which are applicable to the class with which they graduate.

MILITARY SCIENCE REGULATIONS

The Utah State Agricultural College has been designated by law as an institution where units of the Reserve Officers' Training Corps are maintained. As such, it has promised the Government to give certain military instruction of a definite kind and character.

The student by registration at the Institution, obligates himself to conform to such requirements as are or may be prescribed by the College Council under the regulations of the Reserve Officers' Training Corps. These requirements, at present, are as follows: Two years of military training (6 credit hours) are required of all able-bodied male students. By regulation of the College the course is required during the first and second years at the Institution.

In order to remain in and receive instruction at the College or to graduate finally from the College, the student must be in attendance at all military classes and do satisfactory work in them.

It shall be the duty of every student of whom military training is required, to see that he is properly registered for the course and to report for instruction. Students who are required to take military training but fail to register or to report for classes will, with the approval of the President, be

excluded from all classes in the College. The responsibility of complying with the regulations regarding military science rests entirely with the student.

Upon petition, the following classes of students may defer, or be excused from, the requirements in military science:

a. Students who are physically disqualified may be excused from Military Science by the College Medical Examiner. Participation in athletics cancels all excuses from Military Science based on physical disability.

b. Any student entering as a junior or senior may be excused from military science if he has fulfilled the requirements in this subject laid down by the institution from which he comes.

c. In exceptional cases, students over twenty-five years of age at the time of original entrance into the College may be excused from military science.

d. Married students may be excused from the requirements in military science.

e. Students who are not citizens of the United States and who do not intend to become citizens will not be permitted to take military training.

f. A student who is working his way through college by means of employment which conflicts with Military Science may have said requirements deferred during any quarter in which he is so employed. Students taking advantage of this provision must present a letter from their employer substantiating their claim and setting forth the hours of employment.

g. Students who attend college during the Winter quarter only may have the requirements in Military Science deferred during that quarter.

h. Students who are active in the Army, Navy, or Marine Corps of the United States, or who are commissioned officers of the National Guard or Naval Militia, or reserve officers of the military or naval forces of the United States, or members of the Naval Reserves will not be permitted to enroll in the Reserve Officers' Training Corps.

Vocational students are automatically excused from the requirements in Military Science.

A student claiming exemption from military science for any of the reasons noted above will present a petition for such excuse to the appointed Committee on or before the beginning of the quarter in which he desires to be excused. All such petitions will be prepared on the prescribed form which may be obtained in the office of the Professor of Military Science and Tactics, and will be accompanied by letters, or other documentary evidence substantiating the claim. No student will be permitted to submit a petition who has not already duly registered for military science and has entered upon the course of instruction.

Petitions filed after the expiration of two weeks following the date of the student's registration will not be received except for illness or physical disability occurring after such date.

Pending the action of his petition, the student will register for the course prescribed for his class and will enter upon the work of such course.

Any student who may be excused from attendance in military science for any valid reason must make up the deficiency in other departments of study.

Every student registered for military science is required to make a uniform deposit of \$5.00. A laboratory fee of \$1.00 will be deducted from this deposit. The balance, less the cost of any property lost or damaged, will be refunded upon the completion of the year or upon withdrawal from the course.

GRADUATION WITH HONORS

In order to stimulate individual work and to encourage superior students to strive toward their highest possible attainments the college affords opportunity for graduation with honors. Measurements of attainments of honor students is based largely on the student's ability to pursue individual work through a period of two years in preparation for a group of comprehensive examinations. The important elements of the plan are to leave the student sufficient opportunity to develop independence and initiative and yet to provide him with a plan of work, and enough individual instruction to prevent misdirected effort.

Any student of more than usual ability and scholarship who has been admitted to senior college standing may be advanced to candidacy for the Bachelor's Degree with honors under the following conditions:

1. Completion of 48 credit hours in the four basic groups; namely, biological science, exact science, social science and language, and not less than 9 credit hours in each of these groups, provided that a candidate in the School of Engineering shall have 9 credit hours in each of the groups except biological science.

2. Showing of superiority in the proposed major field.

3. Grades as follows at the time of application for candidacy for graduation with honors:

- a. Not less than 50 per cent of the credit hours "A" grade.
- b. Not less than 85 per cent of the credit hours "A" and "B" grade.
- c. No grade used for eligibility for honors work lower than "C".

4. Written approval by the major and minor departments.

5. Presentation to the College Council by the Graduation Committee together with a two-thirds favorable vote of the Council not earlier than the end of the Sophomore Year nor later than the beginning of the second quarter of the Junior Year.

DEPARTMENTAL PLANS AND REQUIREMENTS FOR HONORS WORK

The honors student must satisfy a major department and two minor departments.

In addition to the requirements above specified for advancement to candidacy for graduation with honors the following requirements must be satisfied for graduation:

REQUIREMENTS FOR THE BACHELOR'S DEGREE WITH HONORS

1. Full time work in residence during a period of not less than five quarters nor more than nine quarters after being advanced to candidacy for the honors degree. Three quarters residence must be immediately preceding the conferring of the degree.

2. The completion of 180 credit hours, of which not less than 75 hours must be honors work.

3. The candidate must be recommended for graduation with honors unanimously by the professors in the major and minor departments and must receive favorable vote of two-thirds of the members of the College Council.

GRADUATION AT THE CLOSE OF THE SUMMER SESSION

Any student who can satisfy the requirements for graduation by the close of the Summer Session may be presented to the College Council in May. Such students are listed with the class of the following year, and receive their public graduation at the following Commencement. The graduation of such students, however, will be certified to by the proper authorities of the college as soon as their work is completed.

REQUIREMENTS FOR THE MASTER'S DEGREE

Registration of all graduate students shall be made by the chairman of the committee on graduate work.

The degree of Master of Science may be granted on the completion of the following requirements:

The candidate must have been in actual residence at the College three full quarters after receiving the standard Bachelor's degree (or after having met the requirements for this degree), and must obtain forty-five (45) credits of which at least twenty (20) must be of graduate grade, in addition to the 180 college credits and 15 high school units, or their equivalent, required for the Bachelor's degree.

Summer school students with the baccalaureate degree are allowed six years in which to complete their work and residence requirements for the Master's degree.

To be admitted to the candidacy for the Master's degree the student must have his course of study approved by November 1, or at least seven months preceding the date on which he expects to receive the degree, by the committee on graduate work, the professor in charge of his major subject, and the dean of the school in which his major subject is taken.

A thesis covering the work done in the major department (from 9 to 15 credits) must be prepared by May 1, and must be accepted by the group which approved his candidacy. At least two copies of the thesis must be filed with the college librarian.

The candidate must successfully pass an oral examination which will be given under the direction of the committee on graduate work by the professor in charge of his major subject, the dean of the school in which his major work is taken, and three professors to be selected by the committee on graduate work.

Graduate students should not register for more than 15 credit hours. Students who have established records of high scholarship may be permitted to register for additional credits, (not to exceed 17 per quarter) by the Dean of the Graduate Division.

STUDENT EXPENSES

Students must pay the following fees upon registration:

UTAH STUDENTS

	Three Quarters	Winter and Spring Quarters	Winter Quarter Only	Spring Quarter
Registration fee.....	\$10.00	\$10.00	\$10.00	\$10.00
Tuition.....	27.00	18.00	9.00	9.00
Library fee.....	3.00	3.00	3.00	3.00
Gymnasium fee.....	3.00	2.00	1.00	1.00
Student Body fee.....	15.00	12.00	10.00	7.00
Withdrawal deposit.....	1.00	1.00	1.00	1.00
	<hr/>	<hr/>	<hr/>	<hr/>
	\$59.00	\$46.00	\$34.00	\$31.00

STUDENTS FROM OTHER STATES

	Three Quarters	Winter and Spring Quarters	Winter Quarter Only	Spring Quarter
Registration fee.....	\$35.00	\$35.00	\$35.00	\$35.00
Tuition.....	27.00	18.00	9.00	9.00
Library fee.....	3.00	3.00	3.00	3.00
Gymnasium fee.....	3.00	2.00	1.00	1.00
Student Body fee.....	15.00	12.00	10.00	7.00
Withdrawal deposit.....	1.00	1.00	1.00	1.00
	<hr/>	<hr/>	<hr/>	<hr/>
	\$84.00	\$71.00	\$59.00	\$56.00

All students registered for Military Science and Tactics are required to make a \$5.00 deposit for uniform.

A fee of one dollar per day will be charged those who register late. In no case, however will the fee for late registration exceed five dollars.

All students registering in the fall must pay fee for the entire year. If the student desires to discontinue, refund will be made on all fees except the registration and student body fees. By state law, the Institution may relieve worthy and deserving students from payment of the registration fee, provided that not more than ten per cent of the total student body be relieved of the fee in any one year.

According to the constitution of the Student Body, every regular student must obtain at time of registration a Student Body card which will admit him

to all the activities controlled by the Student Body organization; athletic events—football, baseball, tennis and track—dramatics and musical entertainment, socials, lectures, etc., and, in addition, give him a copy of the annual year book and subscription to the college paper. This system has been found to be a great saving to the students and a most excellent means of fostering proper interest in student activities.

Since all students are required to take Physical Education they must provide themselves with gymnasium suits and gymnasium shoes. The cost is about \$6.00.

Each student in Foods and Dietetics courses and Household Administration 150, must provide herself with the following: Two hair nets, one or two white petticoats, two washable white uniforms, two white work aprons. Each student in Home Nursing courses must provide herself with the following: One or two white petticoats, two washable white uniforms. The uniforms required for the Home Nursing course, and the aprons and uniforms required for the Foods course and Household Administration 150, must be of the standard designs provided by the Textile and Clothing Department. Materials should be procured after consultation with the instructors in charge.

All graduates from the School of Home Economics who desire to qualify as teachers in home economics under the Smith-Hughes Act must spend the required period of residence in the Home Economics Cottage, as indicated in Household Administration 150. The expenses are \$6.00 per week for board and room.

The fee charged for a diploma of graduation is \$5.00

Good board and room in a private home costs from \$6.00 to \$7.50 a week. By renting rooms and boarding themselves, students are able to reduce considerably the cost of room and board.

The College maintains a modern well equipped cafeteria, where students may eat at cost.

The following table furnishes an estimate of the actual yearly expenses of students attending the Utah State Agricultural College:

	Low	Average	Liberal
Tuition, books, fees etc.....	\$ 94.00	\$ 94.00	\$ 94.00
Room and Board.....	200.00	250.00	300.00
Incidentals or Miscellaneous.....	75.00	100.00	150.00
Total.....	<u>\$369.00</u>	<u>\$445.00</u>	<u>\$544.00</u>

Students are held responsible for any injury done by them to the College property.

The Senior Loan Fund, a gift of the class of 1911, and added to by the class of 1922, has helped many students through school.

SELF HELP

A large number of the students of the Utah State Agricultural College earn part of their expenses while in residence. During the fall and spring particularly there is some demand for workers by farmers, fruit growers and owners of city property. The College itself gives employment to many students, and college officers are glad to aid students in finding work.

Young people who expect to earn their way through college should first of all, by earnest labor and careful economy, accumulate as large a college expense fund as possible. It is desirable, though not essential, that this sum be sufficient to cover the expense of the first year. Correspondence or conference with the College Secretary usually reveals some way to earn the additional amount needed. After one year in college, the earnings of the student in vacation and during the college year generally enable him to continue his course without interruption.

It is the policy of the College to encourage and aid in every possible way earnest, ambitious young men and women who want an education and an opportunity to help themselves.

SCHOLARSHIPS AND AWARDS

The Johansen Scholarship Fund of \$5,000, a gift of the late Mrs. Johana Johansen, provides three scholarships annually, worth in the aggregate from \$300 to \$350, for help of worthy students of Junior or Senior rank. Applications for this scholarship must be filed with the chairman of the committee on honors and awards before April 15, for the succeeding year.

The One Thousand Dollar Liberty Bond Endowment yields a loan fund of \$40, which is to be loaned by the Director's Council to a student who has made formal application before April 12, and who has need of financial help and who has demonstrated a high degree of scholarship in the work of previous quarters.

The 1927 Class Gift to the College yields an income sufficiently large to insure two annual scholarships of \$125.00. Recipients are to be selected by the Awards and Honors Committee.

The U. S. A. C. Faculty Women's League has a loan fund for the women students of the college. Loans may range from \$50 to \$200. Preference is given to senior women students. Loans are made at any time during the year when money is available.

The Citizenship Award, given by President Elmer G. Peterson, is awarded annually to the male student who shows evidence of being able to

repay, in greatest measure, to the Nation the investment which it has made in him.

(a) The potential vocational or professional efficiency of the student as shown by his scholarly attainment, his industry, and natural ability and talent, 50 points.

(b) His patriotism, honesty, and good judgment as a student citizen, as an indication of his future attitude as a voter or public servant, combining a progressive spirit with a love of country and a concern for the safety and development of American Institutions of liberty and justice. His qualities of social leadership, as shown in student affairs, based upon physical and moral cleanliness and strength, 50 points.

The Rhodes Scholarships. An appointment to the Rhodes Scholarships in Oxford University, England, is made each year from the State of Utah. They are of the value of \$2,000.00 a year, and are tenable for three years. Students who wish to apply for them must have some social and athletic distinction as well as high scholarship in mathematics, sciences, or letters. All applicants must also have three years of French, and it is advisable to have Latin, German, and English history, as well as high school mathematics. Full information and application blanks may be secured at the President's Office or from Professor Frank R. Arnold, chairman of the Rhodes Scholarship committee. Students who wish to apply for these scholarships are advised to start preparing for them in Freshman year. They are usually given to seniors or graduate students.

The American Legion Scholarship Medal is awarded each year to the letterman on the football team who maintains the highest scholastic record during the football season.

The R. O. T. C. Medal, a gift of the Institution, is awarded each year to the student in Military Science and Tactics who most nearly represents the ideal that the Reserve Officers' Training Corps is striving to develop, upon the following basis:

- (a) Character, 20 points.
- (b) Scholarship, 15 points.
- (c) College Activity, 15 points.
- (d) Leadership, 20 points.
- (e) Aptitude for and interest in Military Science, 20 points.
- (f) Physique and bearing, 10 points.

The American Legion Military Medal is given to a letterman who exhibits the most wholesome attitude toward military training during the year in which he earns his letter.

The Hendricks Medal, a gift of Mrs. Carrie M. Hendricks in memory of the late Professor George B. Hendricks, is awarded yearly to the student who delivers the best extemporaneous speech.

The Sons of the American Revolution award a medal annually for the best patriotic speech.

The Vernon Medal, a gift of Dr. Weston Vernon, is given each year for the best short story written around western characters and with a western setting.

The Phi Upsilon Omicron Scholarship of \$50. 00 is given annually by the Kappa Chapter of that organization to the freshman girl in the School of Home Economics ranking highest on the following points:

- (1) Scholarship.
- (2) Participation in student activities.
- (3) Service and cooperation.
- (4) Leadership.
- (5) Strong moral character.
- (6) Judgment and reliability.

In addition, the candidate must be a member of the Home Economics Club

The Gertrude Musser Howard Medal is to be awarded annually to a senior student in the School of Home Economics on the following basis:

- (a) Qualities of womanhood, as represented by health, physical and moral cleanliness, personality, cooperation, and leadership.
- (b) Application of home economics principles.
- (c) Scholastic attainment.

The Utah State Agricultural College Science Medal, a gift of Professor William Peterson, is given each year to the student writing the best review of recent scientific research in either mathematics, physics, chemistry, geology, zoology, botany, or astronomy.

The Agricultural Leadership Cup is a gift to the college by Dean Kenneth C. Ikeler. The cup will be awarded each year to the Senior student in Agriculture that has exhibited the greatest measure of constructive organization and leadership in the School of Agriculture throughout his college course.

The Titus Medal, given by Dr. E. G. Titus to the winners of the singles tennis tournament for men and women.

Scholarship A's are given at the close of each year to the six highest ranking students.

Several further awards are given for athletic and other student body activities.

A list of the recipients of various honors will be found at the back of the catalogue.

BUILDINGS

The College now has nearly thirty buildings, all modern, well lighted and heated, and all carefully planned.

The Main Building is 360 feet long, 200 feet deep in the central part, and four stories high. It contains the large auditorium, seating about 1,500, the administrative offices of the College and the Experiment Station, the library and many class rooms and laboratories.

The Home Economics Building is one of the largest and best equipped structures devoted entirely to domestic science and arts in the inter-mountain region.

The Thomas Smart Gymnasium is one of the finest and most complete college gymnasiums in the Rokeby Mountain region. It contains a main exercise hall, 114 by 70 feet, the equipment of which can be quickly put in place or hoisted out of the way to suit any need, and a smaller floor for women. Ten feet above the main floor is a running-track, hand-ball court and wrestling and boxing room. The large pool, shower and steam baths, and dressing rooms with steel lockers are ideal.

The Extension Service Building is a two story structure 45 feet long and 35 feet wide, containing the offices of the Extension Service staff, with a dark room for photography.

The Mechanic Arts Building, a two-story brick structure, has a floor area of 40,000 square feet and contains the wood-working department, machine shops, forging rooms, foundry, carriage building rooms, mechanics arts museum, drafting rooms, blue-printing room, room for painting and staining and class rooms—all well equipped.

Widtsoe Hall, containing three stories, thoroughly modern in plan and equipment, is occupied by the Departments of Chemistry, Physics and Bacteriology.

The Livestock Building of three stories is exceptionally well fitted with facilities for the study of dairying, hog, horse, poultry and sheep husbandry, and range management.

The Agricultural Engineering Building, an excellently arranged three-story brick structure, houses the Departments of Irrigation and Drainage, Surveying, Hydraulics, Mechanical Drawing, Architecture, Household

Sanitation, Farm Mechanics, including Auto and Tractor work, and some related phases of the work of the institution.

The Plant Industry Building is a four story brick building, thoroughly modern in arrangement. It houses the departments of Agronomy, Botany, Plant Pathology, and Horticulture.

The Barns contain the various breeds of cattle, horses, sheep and hogs most common in the western section.

The Horse Barn is the most modern structure of its kind that can be built.

The Stock Judging Pavilion makes it possible to do stock judging in all kinds of weather.

The Poultry Yards are equipped with various types of buildings to accommodate about one thousand fowls, a brooder house with a capacity of 2,500 chicks and a modern incubator cellar with standard incubators of several makes and designs. The laboratory is well supplied with different styles and sizes of incubators, brooders, food hoopers, etc., suited to use in study of the management of large and small flocks.

The Green Houses are prepared for laboratory instruction in the propagation of horticultural plants, and in the practice of floriculture and vegetable gardening.

The new Veterinary Hospital contains a well equipped dispensary, operating room, stalls for patients, and up-to-date fixtures.

The Seed House is designed as a store house for the seeds of the Department of Agronomy.

A modern heating plant recently renovated and enlarged keeps the building comfortably warm during the winter months.

EQUIPMENT

The Bacteriological Laboratory is well equipped with modern apparatus. To encourage careful work, the students are provided with individual lockers.

The Chemical Laboratories are modern and thoroughly equipped.

The Physical Laboratory Equipment is complete, consisting of all the necessary apparatus for class demonstrations. Gas, compressed air, continuous and alternating current, electric power, etc., are available.

The Physiological Laboratory is supplied with an excellent collection of native animals, skeletons, both articulated and disarticulated, many enlarged models of organs, a papier Mache manikin, and complete slides of all the tissues.

The Zoological and Entomological Laboratory is equipped with water and gas, improved instruments, embryological models, skeletons from the vertebrae groups, collections of mounted birds, mammals, reptiles, fishes and insects.

The Botanical and Plant Pathological Laboratory is well equipped for general work as well as for research. The department maintains a good working library in connection with the laboratory.

The Department of Agronomy is provided with a large collection of agricultural plants, seeds, and soils representing the main crops and types of soil of the inter-mountain region.

The College Farms are equipped with the best and latest implements and machinery for carrying on work scientifically. They are divided for illustrative and experimental purposes, into numerous plats on which many varieties of farm crops are grown and upon which important experiments are carried on.

The Soil Physics Laboratory has a good supply of apparatus for accurate and up-to-date work.

The Farm Crops Laboratory, equipped with gas, has a large supply of farm crops on hand and is well supplied with apparatus.

The Commercial Rooms, occupying the entire third floor of the front of the Main building, are specially designed and furnished for business. The room for typewriting contains a full complement of standard machines.

The College Museum contains many specimens illustrative of geology, mineralogy, paleontology and vertebrate and invertebrate zoology, including a large series of plants of the western mountain region and an extensive series of plants of the western highlands. An extensive collection of grains represents the produce of Utah and other states. Contributions of fossils, ores, animals, plants, relics or other material of value to the museum, are appreciated. All gifts are labeled and preserved and the names of the donors are recorded.

The Art Rooms, composed of six studios, are supplied with plain and adjustable tables, easels and model stands, individual lockers, cases for materials, casts from the old masters in sculpture, reproductions of great paintings, still-life models and draperies, and a valuable collection of ceramics, textiles, and books on art.

The Library occupies the entire front of the second floor of the Main building. It is the laboratory for every course given at the College, and contains 36,000 books, and a large number of pamphlets. The books are classified by the Dewey decimal system and there is a complete dictionary and catalogue. The shelf list, also on cards, forms a classified catalogue for official use.

The library is also a depository for United States documents and for the Carnegie Institute. The files of the United States Department of Agriculture and publications of the Experiment Stations are nearly complete; the bulletins are bound and made easy of access by the printed card catalogues. There are one hundred and forty periodicals on the subscription lists, besides about one hundred which are received as exchanges for publications of the college and of the Experiment Station. Practically all the newspapers of the State are on file in the Reading Room. The Reading Room is beautifully furnished in oak, and contains many oil paintings and pieces of statuary.

CAMPUS AND FARMS

The land occupied by the College embraces about 155 acres. Of this, forty acres constitute the campus, laid out with flower beds, broad stretches of lawn, tennis courts, wide drives and walks.

Immediately east of the Main building is the quadrangle of about ten acres. A large athletic stadium located just north of the campus on a ten-acre tract of land affording a beautiful view of the east mountains and Cache Valley, is the new home for U. S. A. C. athletic contests. The farms comprise 97 acres, the orchards and the small fruit and vegetable gardens, 10 acres.

Other farms are maintained under the direction of the Experiment Station in various parts of the State.

The equipment of the Branch Agricultural College is described in the circular of that institution.

THE STUDENT BODY ORGANIZATION

The Student Body Organization embraces all the students of the Institution. Its prime object is to foster a proper spirit of college loyalty, and to give the students practice in managing public affairs. It also secures dispatch and efficiency, as well as uniformity, in the administration of all matters pertaining to the entire student body, and induces all students to participate in college activities. The organization provides each member with a maximum of proper athletic, theatrical, and social recreation at a minimum expense. This society has control, under faculty direction, of the following student activities:

1. **Athletics**, including all inter-class and intercollegiate contests in football, basketball, track, tennis, swimming, and wrestling events. The College is a member of the Rocky Mountain Conference, a fact which insures an interesting athletic program.
2. **Musicals**, including all public performances of the Band, the Orchestra, and Musical clubs.
3. **Theatricals**. In the past, *A Midsummer Night's Dream*, *She*

Stoops to Conquer, Pygmalion, Milestones, The Admirable Crichton, What Every Woman Knows, Twelfth Night, and various other productions have been presented.

4. **Debating and Public Speaking.** Triangular debating arrangements have been made whereby, annually, the Agricultural College debates the University of Utah and the Brigham Young University on the same question. Interstate debates are also held. Those who make places on the teams not only win awards, but are admitted to membership in the Agora, an honorary debating fraternity. Debaters showing special excellence are admitted to membership in Tau Kappa Alpha, a national honorary debating fraternity, a chapter of which is established at the College. Interest in debating is keen.

The annual oratorical contest for the Hendricks medal and for that given by the Sons of the American Revolution maintain among the students an active interest in extemporaneous public speaking.

5. **Student Publications.** The students of the College, under the direction of the faculty of English, publish a weekly school paper, **Student Life**, and the College year book, named **The Buzzer**; the Scribblers' Club publish **The Scribble**; The Agricultural Club, the **Ag. Club Link**. Interest in journalistic work is stimulated by the presence on the campus of the chapter of the national honorary journalistic fraternity, Pi Delta Epsilon.

6. **Lyceum Course.** Each year the Student Body presents from six to eight numbers of national or local repute. These entertainments are free to members of the Student Body.

STUDENTS CLUBS

Not affiliated with the Student Body organizations, but standing largely for the interest of the various schools, are the following clubs:

The Agricultural Club, which aims to promote interest in scientific and practical agriculture. The club has effected similar organizations in the high schools of the State. Special lectures, often illustrated, are given at intervals throughout the season. The club conducts an annual tour, studying farm conditions in northern Utah.

The American Association of Engineers, a local chapter of the national organization made up of students and practicing engineers. Any student majoring in any branch of engineering is eligible for membership. The purpose of the organization is the advancement of the engineering profession and the promotion of the economic and social welfare of the engineer. Regular monthly luncheons are held at which men of repute are invited to speak on pertinent current problems.

The Home Economics Club, to which all students registered in the School of Home Economics are eligible. The object of the club is four-fold:

1. To stimulate interest in Home Economics;
2. To broaden and elevate each member's ideals for social, industrial, and economic life, thereby helping her better to fit into the home and community;
3. To provide wholesome recreation;
4. To foster ties of friendship among the members.

The Mechanic Arts Association, designed to promote the social and intellectual interests of its members. All the teachers and all the regularly enrolled students of mechanic arts are eligible to membership. Monthly meetings are held throughout the year, at some of which lectures are given by specialists.

Phi Kappa Phi, a chapter of the national honorary scholarship fraternity.

Tau Kappa Alpha, a chapter of the national honorary debating fraternity open to both men and women.

Alpha Kappa Psi, a national fraternity, devoted to the interests of commerce and business.

The Friars Club, a state-wide organization which purposes to keep alive the "Missionary Spirit" among its members, and to promote social and educational functions, is open to male students who have spent six months or more in exclusive missionary work.

Phi Upsilon Omricon. The Kappa charter of this national professional and honorary fraternity is installed at the College. Its purpose is to stimulate interest in Home Economics.

Scabbard and Blade, a company of the national, honorary, military fraternity of the same name, organized to perpetuate American ideals and efficiency among young college men and open to cadet officers who have shown particular excellence in their R. O. T. C. work.

Pi Delta Epsilon, a chapter of the national honorary journalistic fraternity.

The Agora, a local organization open to men and women from the inter-collegiate debating teams. Its purpose is to foster debating in the College and keep alive among the old debaters an interest in such contests. Students may become members of both Tau Kappa Alpha and the Agora.

The Chemistry and Physics Club, organized to promote interest in chemistry.

The Be-No Club, organized to foster scholarship, fellowship and loyalty.

The Periwig Club, composed of students prominent in dramatics. This club produces annually several plays.

The Booklovers' Club, organized for the study of subjects related to English literature, but not usually treated in the classroom.

The Scribblers Club, an organization of writers.

The Cosmos Club, organized for the study of present day problems; open only to men.

The Jesters, a group of campus players chosen from a list of successful performers in high school.

Theta Alpha Phi, an honorary, professional dramatic fraternity.

The Tennis Club, organized to promote interest in tennis and to develop players for intercollegiate matches.

The Empyrean Club, organized for the study of current problems; open only to women of Senior College Standing.

Le Cercle Francais, maintained by students in French for practice in speaking the language.

The Cosmopolitan Club, composed of faculty members and students and organized for the purpose of furthering internationalism and world peace. To be eligible for membership, candidates must be of foreign birth, must have lived in a foreign country or show a keen interest in world problems.

Beaux Arts Guild, designed to encourage interest in the various phases of Art by lectures and informal social meetings.

Alpha Sigma Nu, a senior honorary society. Membership is maintained by election from the Junior class held each spring.

The Men's Rifle Club, organized to foster marksmanship among its members.

The Women's Rifle Club, composed of women interested in the use of firearms.

The Botany Club, composed of students especially interested in botany. Lectures are given by faculty members and initiation discussions by new members.

The Short Story Club, organized to promote interest in the short story.

The Girls' Athletic Club, composed of women students who are particularly interested in athletic contests, hiking, etc.

Various other clubs, as well as a number of fraternities and sororities are also to be found on the campus.

DEPARTMENT OF INSTRUCTION

(ARRANGED ALPHABETICALLY)

Agricultural Economics and

Marketing

Agronomy and Soils

Animal Industry

- a. Animal Husbandry
- b. Dairy Husbandry and Manufacturing
- c. Poultry Husbandry
- d. Veterinary Science

Bacteriology and Biochemistry

Botany

Business Administration and

Accounting

- a. Accounting
- b. Advertising and Selling
- c. Business Administration
- d. Secretarial Work

Chemistry

Economics and Sociology

Education

English and Speech

Engineering

- 1. Civil Engineering
 - a. Applied Mechanics and Design
 - b. Highways
 - c. Irrigation and Drainage
 - d. Mechanical Drawing
 - e. Surveying

2. Agricultural Engineering

- a. Rural Architecture
- b. Farm Machinery and Farm Motors

3. Mechanic Arts

- a. Auto Mechanics
- b. Auto Ignition
- c. Forging
- d. Machine Work
- e. Woodwork

Foods and Dietetics

Forestry

Geology

History

Horticulture

Household Administration

Mathematics

Military Science and Tactics

Modern Languages and Latin

Music

Physical Education

- a. For Men
- b. For Women

Physics

Political Science

Physiology and Public Health

Psychology

Textiles and Clothing

Zoology and Entomology

RECITATION TABLE

The recitation hours are sixty minutes in duration and begin at 8:00 a. m. The following shows the entire schedule:

1st hour, 8:00-9:00	4th hour, 11:00-12:00	7th hour, 2:00-3:00
2nd hour, 9:00-10:00	5th hour, 12:00-1:00	8th hour, 3:00-4:00
3rd hour, 10:00-11:00	6th hour, 1:00-2:00	9th hour, 4:00-5:00

Courses of Instruction

AGRICULTURE AND FORESTRY

AGRICULTURAL ECONOMICS AND MARKETING

(Administered jointly by the schools of Agriculture and Commerce)

W. PRESTON THOMAS, Professor: WALTER U. FUHRMAN, Assistant Professor.

Students in either the School of Agriculture or the School of Commerce may major in this department. Students specializing in the division of Agricultural Administration should register in the School of Agriculture. This will lead toward such occupations as the management of farms, teaching of farm management, employment as county agents, etc. Students wishing to specialize in the division of Agricultural Marketing should register in the School of Commerce. This will lead toward the business of marketing, management of cooperative enterprises, etc.

The foundation work in the first two years is similar, and should include studies in the different branches of the School of Agriculture, as well as in the School of Commerce. Liberality in the selection of these courses is permitted, depending upon the type of occupation which the student intends to follow after graduation; but it should include at least twelve credits from the School of Agriculture, and twelve from the School of Commerce before entrance to the Senior College. In the selection of these preliminary courses students should secure the approval of the Department of Agricultural Economics, and of the Department in the School of Agriculture or the School of Commerce offering the technical courses which they later elect as minor.

51. Principles of Agricultural Economics. A general study of the principles of economics as they relate to agriculture. The production and distribution of agricultural products, together with government policies toward agriculture, and the relationship between agriculture and other industries, will be given special consideration. Spring Quarter. Five Credits.

Fuhrman

102. Farm Management. An analysis of the principles and problems of farm organization and management. A study of the problems of choosing, buying, organizing, and managing the various types of farms. Discussion of

proper size, balance, diversity, and the relationship between the various enterprises. Prerequisite, Agricultural Economics 51. Fall Quarter. Five credits.

Fuhrman

103. **Farm Accounts.** The practical application of accounting principles to farm management problems. Modifications to suit the different types of farming enterprises will be studied. Assembling and interpretation of accounting data. Lectures and assigned practice problems. Fall Quarter. Four credits.

Peterson

104. **Economic Development of Agriculture.** A historical analysis of Agriculture through the various stages of its development, with special reference to the United States.

(Not given 1929-30)

105. **Agricultural Finance.** A study of agricultural credit with regard to requirements, facilities, instruments, and methods of financing agriculture. This involves an analysis of our present financial organization and its relation to agriculture. Special attention will be given to the agencies authorized by the Federal Government to provide financial aid and credit to farmers and farmers' organizations. Prerequisite, General Economics. Winter Quarter. Three credits.

Fuhrman

106. **Land Economics.** Principles underlying the utilization, valuation, tenure, and conservation of our land resources available for crops, pastures, and forests. Prerequisite, Agricultural Economics 51.

(Not given 1929-30)

112. **Marketing Agricultural Products.** The principles of marketing, types of marketing agencies, functions of middlemen, channels of distribution, consumers' demand, Government's relation to marketing, and proposals for improvement. Prerequisites, General Economics 50, and Agricultural Economics 51. Fall quarter. Three credits.

Fuhrman

113. **Cooperative Marketing.** This course deals with the fundamental principles of cooperative marketing of agricultural products, the legal status of cooperation in the United States, and a study of the growth and development of cooperative marketing. The development, possibilities and limitations of cooperative marketing in Utah, together with the organization, financing, membership, marketing, and production factors will be studied.

The problems confronting cooperative marketing associations and the industry as a whole will be given special consideration. Winter quarter. Five credits.

Thomas and Fuhriman

114. Marketing Fruits and Vegetables. Trends in production, consumption, and marketing fruits and vegetables in United States as a whole, and in Utah, together with special problems of over-production, local and foreign competition, quality of products, transportation factors, grading, inspection and marketing methods will be given consideration. Spring quarter. Three credits.

Fuhriman

115. Production Economics. A study of the factors of production and their physical and economic combination, with the purpose of indicating how these factors must be combined in order to produce the greatest profit to the entrepreneur, and how changes in price relationships affect the combination of the elements of production. Winter quarter. Three credits.

Fuhriman

116. Marketing Livestock and Livestock Products. The production and marketing factors as they relate to the marketing of livestock and livestock products, with special reference to Utah's conditions, will be given in this course.

(Not given 1929-30)

120. Agricultural Prices. Relationship between production and price of agricultural products; trends in prices of agricultural commodities in Utah and competing states, in comparison with prices of non-agricultural products, and price cycles in their relation to Utah's agriculture. Prerequisites, Agricultural Economics 51 and 112. Winter quarter. Three credits.

Thomas

191. Advanced Farm Management. A detailed farm management analysis, including methods of making surveys, collecting, tabulating, organizing and analyzing data, and a study of the application of results toward the improvement of the farm business. The student will be expected to do some actual field work and to analyze farm management data in the laboratory. Spring quarter. Five credits.

Fuhriman

210. Research in Agricultural Economics. Time and credit to be arranged.

Thomas and Fuhriman

211, 212, 213. Agricultural Economics and Farm Management Seminar. All seniors and graduate students majoring in this department are required to take part in these round table discussions of current problems and recent publications in Agricultural Economics and Farm Management. Fall, Winter, and Spring quarters. One credit each quarter.

Thomas and Fuhrman

SUGGESTED COURSE OF STUDY FOR MAJORS IN AGRICULTURAL ECONOMICS

Freshman Year		Sophomore Year	
Course	Hours	Course	Hours
Economics 51 and 52.....	10	Agricultural Economics 51.....	5
Freshman Composition 10,11, 12	9	Economic History 30.....	3
Mathematics 20 and 21.....	6	Marketing 112.....	3
Chemistry.....	5	Language.....	5
*Biological Science.....	6-8	*Biological Science.....	4-6
*Agriculture.....	3-6	*Agriculture.....	9
Typewriting.....	3	Mechanical Drawing.....	3
		Commercial Law.....	9
*Elective.....	3-4	*Elective.....	4-8
Total	45-51		45-51

Junior Year		Senior Year	
Course	Hours	Course	Hours
Agricultural Finance 105.....	3	Farm Management 102, 191..	10
Commodity Marketing.....	3	Cooperative Marketing 113...	5
Statistical Methods 131.....	5	Production Economics 115.....	3
Accounting 101.....	5	Agricultural Prices 120.....	3
Taxation 155.....	5	Business Forecasting 132 or	
Geography of Agr.	5	Transportation Econ. 135 ..	5
Applied Sociology or		Money and Credit 165.....	5
Rural Sociology.....	3	Research.....	5
Journalism.....	4	Seminar.....	3
*Agriculture.....	9		
*Elective.....	5-11	*Elective.....	6-12
Total	45-51		45-51

*The particular courses to be selected will depend upon the special interest of the student. He should consult with his major and minor professors in the selection of these courses.

AGRONOMY AND SOILS

GEORGE STEWART, Professor; D. W. PITTMAN, Associate Professor;

A. F. BRACKEN, D. C. TINGEY, Assistant Professors

NOTE: Students who major in Agronomy are expected to take Courses 1 or 2, 3, 106, 108, 109, 111, 113, 117, 104 or 110, and one of these three: 114, 116, 119. Irrigation and Agricultural Economics 102 are recommended in the minor of agronomy majors. Students not majoring in agronomy but who wish to be recommended as capable of doing agronomy teaching or technical work should take courses 3, 1 or 101, 106, 109, 117, and one of these three: 104, 108, 116.

1. **General Crops.** The history, cultivation, production, and marketing of cereal crops; a basis for judging and grading plant products. Must be preceded or accompanied by Botany or Chemistry. Three lectures. One lab. Winter quarter. Four credits.

Bracken

2. **Root Crops.** Sugar-beets, potatoes, mangels, turnips, other root crops, and beans; cultural methods, market types, and commercial possibilities are studied in detail. Three lectures. One lab. Fall quarter. Four credits.

Tingey

3. **Forage and Miscellaneous Crops.** Alfalfa, clovers, grasses, and other forages; methods of handling hay; meadow and pasture management, and soiling crops, are discussed. Must be preceded or accompanied by Botany or Chemistry. Three lectures. One lab. Spring quarter. Four credits.

Tingey

101. **General Crops.** Essentials in the production of principal field crops; small grains, corn, potatoes, sugar-beets, and miscellaneous crops. Designed for those students not majoring in Agronomy who wish minimum work in crops. Courses 1 and 2 are recommended for Agronomy majors instead of course 101. Prerequisites, Chemistry and Botany. Three lectures, one or more labs. Spring quarter. Four of five credits.

Pittman

104. **Weeds, Seeds and Grading.** Common weeds of Utah and methods of eradicating them; the quality and care of seeds; market classes and grades of grain, seeds, hay, and potatoes. Prerequisites, Botany, Agronomy 1 and 2 or 3 (or 101); some horticulture preferred. One lecture, two labs. Fall quarter. Three credits.

Tingey

105. Seed Analysis and Testing. Impurities of farm and garden seeds; methods of analysis and testing; the inspection and marketing of seeds. Prerequisites, Botany, Agronomy 1, 2, (or 101). Not given except on application of two or more students who have open, during the week, the same two laboratory periods, of three hours each. Any quarter. Two or more credits. Two or more laboratory periods a week. Time to be arranged.

Tingey

106. Soils. Review of the entire field of soils study; designed as a foundation course for all students of agriculture. Prerequisites, Chemistry 1, 2 (High School chemistry not adequate). Three lectures, one lab. Fall quarter. Four credits.

Pittman

108. Management of Arid Soil. The composition, nature, and management of soils of arid regions; special attention to water relations, alkali, rotations, and other problems in the management of arid soils. Prerequisites, Agronomy 106 and either Geology 102 or Bacteriology 1, preferably both. Spring quarter. Four or more credits.

Pittman

109. Plant Breeding. Varieties of field crops; their selection and improvement; attention to the methods of plant breeding as practiced in America and Europe. Prerequisites, Genetics and Botany. Three lectures, one lab. Winter quarter. Four or more credits.

Stewart

110. Soil Fertility. Principles of soil fertility; fertilizers and their most productive use; review of experimental work in America and Europe. Prerequisites, Chemistry 1, 2, and Agronomy 106. Winter quarter. Two or more credits.

Pittman

111, 112, 113. Seminar. Current agronomic literature; agricultural problems; assigned topics. Required of all seniors and graduates in agronomy; open also to juniors. Fall, Winter, and Spring quarters. One or two credits each quarter.

Staff

114. History of Agriculture. Development of agriculture, with emphasis on practical and scientific phases; the successive steps by which modern agriculture has attained its present status. Winter quarter. Two to five credits.

Bracken

116. **Dry-Farming.** Principles of dry-farming from practical and scientific standpoints; a survey of agricultural work in the Great Plains and the Mountain regions; an analysis of the possibilities in typical climatic areas and on important soil types. Selecting and organizing a dry-farm unit. Advanced students may obtain additional credit for extra work. Winter quarter. Three lectures. Two to four credits.

Bracken

117. **Geography of Agriculture.** Relation of geography to present agricultural development; where plant and animal products are produced; why only in the present regions; a survey of the United States with respect to possible new agricultural development; effect of the relative position of the large markets to agriculture, especially in Utah. Spring quarter. Two to five credits.

Stewart

119. **Crops Products.** Nature, importance, and uses of various crop products; their physical and chemical nature; their effects on the market value of the crop; and their place in agricultural technology. Related soil problems are also discussed. Prerequisites, Organic Chemistry and Botany. Winter quarter. Three credits.

(Not given 1929-30)

Bracken

207. **Comparative Soils.** Soils of Utah; their origin, composition, and agricultural value; soil provinces of the United States, especially those of the arid regions; the soil survey. Prerequisites, Agronomy 106, 108, and Geology 102, 103, 104. Lecture and lab. Spring quarter. Two or more credits in proportion to work done.

Pittman

208. **Management of Arid Soils.** Special problems in the management of arid soils. Original papers are considered in addition to regular lectures and discussions. Three lectures, one or more labs. Winter quarter. Three to six credits.

Pittman

209. **Advanced Plant Breeding.** The science and practice of plant breeding. Original papers and lectures. Three lectures, one or more labs. Winter quarter. Three to six credits.

Stewart

212. Graduate Seminar. Current scientific papers and topics in Agronomy. Fall, Winter, or Spring quarter. One to three credits.

Staff

214. History of Agriculture. Development of scientific agriculture with emphasis on recent period. Original papers and lecture material. Winter quarter. Two to five credits.

Bracken

215. Plant Production. Recent experimental information on plant production and soil management; analysis of research methods; classification of important varieties of field crops, reviews of the scientific literature. Prerequisites, at least one course in Botany, Agronomy, and Bacteriology or Geology. Open to approved senior college students. Winter quarter. Two to five credits.

Stewart

217. Geography of Agriculture. Relation of geography to production and to development of agriculture. Spring quarter. Two to five credits.

Stewart

218. Special Soil Problems or Advanced Laboratory. Students desiring to do advanced laboratory work, or to make a special study of any particular soil problem will make a complete study of available literature on this problem under supervision of the instructor and write a thesis. One to five credits. Prerequisites, Agronomy 106, and either General Bacteriology or General Geology. Any quarter.

Staff

220. *Dynamic Soil Process. The soil will be treated as a natural body developed through the operation of a definite moisture-temperature history. The soil profile, soil horizon, soil morphology, and soil colloids will be considered as indices to the age and properties of the soil. The zonal distribution of soils will be emphasized. Winter quarter. Two credits. Seniors admitted on approval.

Jennings

230. Research and Thesis. Organizing and prosecuting a thesis, or a research problem without thesis. Any quarter. Two or more credits each quarter.

Stewart, Bracken, Tingey, Pittman, Jennings

*Students who are interested in technical study may be assigned to Experimental Station laboratories where they will be under the direction of the man in charge.

ANIMAL INDUSTRY SECTION

The Animal Industry Section includes the courses of instruction in the closely related special departments of Animal Husbandry, Dairy Husbandry, Dairy Manufacturing, Poultry Husbandry, and Veterinary Science.

ANIMAL HUSBANDRY

KENNETH C. IKELER, GEORGE B. CAINE, Professors; A. C. ESPLIN, HARRY H. SMITH, Assistant Professors; GEORGE R. HENDERSON, Fellow.

The department of Animal Husbandry offers instruction in the selection, breeding, feeding, management, and marketing of cattle, horses, sheep, and swine; in the slaughtering, cutting, and curing of meats, and in the study and quality of wool.

The following courses should be taken by students who major in Animal Husbandry; 1, 2, 3, 10, 101, or 102, 103, 104, 105, 107, 108; D. H. 109, or 110, and Animal Husbandry Seminar. Courses in Dairy Husbandry, Dairy Manufacturing, Sociology, Poultry Husbandry, and Veterinary Science may be used to strong advantage in the major. Accounting, Agronomy, Agricultural Economics and Marketing, Bacteriology, Botany, Commercial Law, Entomology, Farm Mechanics, Geology, Horticulture, Irrigation, Organic Chemistry, and Range are among the supporting courses most strongly recommended for graduation in Animal Husbandry.

1. **Market Types of Live Stock.** The score card and comparative judging of the market grades of commercial cattle, horses, swine and sheep. Lectures and Lab. Fall or Winter quarter. Five credits.

Caine and Smith

2. **Breed Types of Livestock.** The origin, history, characteristics and selection of the economic breeds of horses, cattle, sheep, and swine. Winter quarter. Five credits.

Ikeler, Caine and Esplin

Four large silver cups have been given to the Animal Husbandry Department by progressive breeders of horses, beef cattle, sheep, and hogs respectively. Each Spring quarter judging contests will be held in these classes, the winning student to have his name and year engraved on the cup won. Eligibility rules will be announced before the contest.

3. Market Classes and Grades of Live Stock. The commercial classss and grades of market cattle, sheep and hogs. Students will compile market quotations and will classify and evaluate animals for market. Prerequisite: A. H. 1 or 2. Lecture and Lab. Spring quarter. Three credits.

Smith

4. Market and Breed Types of Livestock. (For Forestry and Range Students). The Practical selection and judging of commercial and breed types of horses, cattle, sheep, and hogs. Lecture and Lab. Spring quarter. Three credits.

Smith

6. Beef Cattle Production. The selection, feeding, and marketing of range and feeder cattle, and the management of the breeding herd of beef cattle. This course includes a trip to Ogden and Salt Lake Stock Yards for study purposes. Fall quarter. Three credits.

Smith

7. Horse Husbandry. A study of market types and the breeding, feeding, handling and selling of draft and light horses. Spring quarter. Three credits.

Caine

8. Swine Management. The management of the breeding herd of hogs, feeding for market, and the fitting for show. The relation of the industry to dairy cattle farming. Winter quarter. Three credits.

Smith

9. Sheep Husbandry. A study of the methods of producing sheep for meat and wool under range and farm conditions. Also a study of sheep husbandry of the leading sheep producing countries of the world. Special emphasis is placed upon sheep and wool production upon the ranches and the farms. The farm sheep include small commercial herds, pure bred herds, and winter lamb feeding. Winter quarter. Three credits.

Esplin

10. Wool Study. A history of sheep and wool production. A study of the zoological position of sheep, and the physical and chemical structure of the wool fiber. The grading of wool, shrinkage, and a study of market reports. A study of the relation of quality in raw wool to quality in manufactured woolen products. Prerequisites, Chemistry 1 and 2, or 3, 4, and 5. Lecture and Lab. Winter quarter. Three credits.

Esplin

100. Principles and Practices of Judging Livestock. This is a course designed for students that wish to register for Animal Husbandry 107 and become candidates for the livestock judging team the following fall. Lecture and Lab. Spring quarter. Two credits.

Smith

101. Livestock Management. Instructions and practice in the feeding and fitting of horses, cattle, sheep, and hogs for show or sale. A show of college livestock and an auction sale will be a part of this course. Lecture and Lab. Spring quarter. One to three credits.

Caine, Smith and Esplin

102. Problems in Pedigreed Live Stock. This course emphasizes the characteristics essential in the animal breeder for constructive and financial success in producing pure bred animals. The business aspects, capital involved, the purchasing of foundation stock, and the production, conditioning, advertising, and selling of pedigreed stock. Spring quarter. Three credits.

Ikeler

103. Feeds and Feeding. The principles of feeding, and how animals digest and utilize feed. The balancing of rations, and the feeding of horses, cattle, sheep, and hogs for economical production. Winter quarter. Five credits.

Smith

104. Animal Nutrition. The anatomy and physiology of the digestive tract. Digestion, metabolism, and energy balances. The essential vitamins, deficiency diseases, and the value of minerals in an adequate ration. Prerequisites, Organic Chemistry and Veterinary Physiology. Spring quarter. Five credits.

Ikeler

105. Livestock Breeding. The principles and practices of livestock improvement. A study of heredity, variation, selection, breed analysis, and herd synthesis, in breeding, out crossing, and cross breeding. Prerequisites, Zoology 111, (Genetics). Spring quarter. Five credits.

Smith

106. Herd Book Study. The tracing of livestock pedigrees from herd books. Problems in pedigrees, methods of breeding, leading tribes and families. Lecture and Lab. Spring quarter. Three credits.

Smith

107. **Advanced Stock Judging.** The comparative judging of breeding and market horses, cattle, sheep, and swine to prepare students for officiating at Livestock Shows. Herds away from the college will also be studied for the purpose of selecting a livestock judging team. Lecture and Lab. Fall quarter. Four credits.

Smith and Esplin

108. **Wool.** This course is a study of wool as a finished product of the ranch and farm, considering the fleece as a unit. The study includes the physical and chemical properties of the wool fiber, grading and sorting, explanation of terms used in market reports, and determination of shrinkage. Consideration is given the world wool supplies as fleece wools, pulled wools and reworked or shoddy wools. Visits to Logan City Knitting factories and Brigham City Woolen Mills are included. Prerequisites, Chemistry 1, 2 or 3, 4, 5. Lecture and Lab. Winter quarter. Three credits.

Esplin

109. **Farm Meats and Meat Products.** The slaughtering of farm animals and the cutting and curing of meats on the farm. Trips will be taken to local meat shops and to the Ogden and Salt Lake Packing houses. The students will evaluate the animals on foot and measure their judgment in the dressing percent, and quality of the product in the carcass. Lecture and Lab. Winter quarter. Three credits.

Smith

110. **Selection of Meats for the Household.** A study of the principles and practices in the selection of quality meats for the table. This course is open for women students. Winter quarter. Two credits.

Smith

111. **Live Stock Practice.** Open to those students in Animal Husbandry who have not had a practical training. The professor in charge will arrange for the employment with the ranchman, and upon satisfactory approval of the student's work, credit may be given at the rate of one credit for each month of approved employment. Summer quarter.

Smith

120, 121, 122. **Animal Husbandry Seminar.** Reports and discussion of current literature and research in Animal Husbandry, by students and faculty members. Fall, Winter and Spring quarters. One credit each quarter.

Caine, Esplin and Smith

200. Graduate Research. Students working towards a graduate degree in Animal Husbandry are required to conduct research in some branch of the subject. Time and credit by special arrangement.

Animal Husb. Staff

203. Scientific Meat Studies. A study in the cutting and curing of meats; for Senior College and graduate students. This course emphasizes the physical structure and the chemical composition of meats, and their relationship to nutritional qualities. Prerequisites, Animal Husbandry 11, and Organic Chemistry. Winter quarter. Two credits.

Smith

205. Animal Production. This is a survey of the research conducted in the breeding and feeding of livestock. Prerequisites, Animal Husbandry 104 and 106. Spring quarter. Three credits.

Ikeler, Esplin, Smith

210. Graduate Thesis. The outlining, prosecuting and summarizing of Animal Husbandry research data for a thesis. Two to five credits each quarter.

Animal Husb. Staff

SUGGESTED COURSE FOR STUDENTS MAJORING IN ANIMAL HUSBANDRY

FRESHMAN YEAR

(Animal Industry)

		F.	W.	S.
Botany 21, 22.....	Ag'l Botany.....	5	5	..
Bacteriology 1 and 2.....	Gen. Bacteriology.....	..	..	5
English 10, 11, 12.....	Eng. Composition.....	3	3	3
Vet. Science 10.....	Veterinary Elements.....	..	4	..
An. Husb. 1.....	Market Types of Stock.....	5	..	..
An. Husb. 3.....	Classes and Grades.....	..	..	3
Dairy 2.....	Farm Dairying.....	..	..	4
Poultry 1.....	Gen'l Poultry.....	..	..	4
Ag. Eng. 13.....	Farm Motors.....	4	..	..
Electives.....		..	1	2
		<hr/>	<hr/>	<hr/>
		17	17	17

SOPHOMORE YEAR

(Animal Industry)		F.	W.	S.
Chem. 3, 4.....	Inorganic Chem.....	5	5	..
Chem. 26.....	Organic Chem.....	..	..	5
Zoology 1.....	Gen'l Zoology.....	..	..	5
Econ. 50.....	Gen'l Economics.....	3	..	..
Agr. Econ. 51.....	Econ. of Agriculture.....	..	..	3
An. Husb. 2.....	Breed Types.....	..	5	..
An. Husb. 8.....	Swine Management.....	..	3	..
Agron. 1, 2.....	Cereal Roots.....	4	4	..
Hort. 1.....	Gen'l Horticulture.....	5	..	..
Ag. Eng. 12.....	Irrigation & Drainage.....	..	..	3
Electives.....	.....	..	..	1

JUNIOR YEAR

(Animal Industry)		17	17	17
Entomology 13.....	Gen'l Entomology.....	4	..	..
English 125, 126.....	Agr. Journalism.....	2	2	..
Zoology 111.....	Genetics.....	5	..	..
An. Husb. 101.....	Live Stock Management.....	..	..	3
An. Husb. 105.....	Animal Breeding.....	..	..	5
An. Husb. 109, 100.....	Meats and Judging.....	..	3	2
An. Husb. 9 or 109.....	Sheep and Wool.....	..	3	..
Dairy Husb. 109.....	Milk Production.....	..	3	..
Poultry Husb. 105.....	Management.....	..	3	..
Vet. Science 107.....	Infectious diseases.....	..	..	4
Agronomy 106, 117.....	Soils and Geography.....	4	4	..
Ag. Econ. 102.....	Farm Adm.....	..	..	3
Electives.....	.....	2	..	..

SENIOR YEAR

(Animal Industry)		17	18	17
Agri. Econ. 111.....	Marketing.....	3	..	..
Eng. and Language.....	Elective.....	6	4	4
Accounting.....	Farm Accounts.....	..	..	3
Agronomy 109.....	Plant Breeding.....	..	4	..
An. Husb. 120, 121, 122.....	An. Husb. Seminar.....	1	1	1
An. Husb. 107.....	Adv. Judging.....	4	..	..
An. Husb. 103.....	Feeds and Feeding.....	..	5	..
An. Husb. 104.....	Animal Nutrition.....	..	..	5
An. Husb. 6, 7, or 8.....	Beef Cattle, Horses or Hogs.....	3	3	..
Range or Hort.....	Management.....	..	..	4
		17	17	17

DAIRY HUSBANDRY AND MANUFACTURING

GEORGE B. CAINE. Professor; A. C. MERRILL, Assistant Professor

Students majoring in Dairy Husbandry must complete the following major courses for graduation: Dairy 1 or 2, Dairy 8, Animal Husbandry 1, 103, 104, 105, 107, as well as all courses listed in the Department of Dairy Husbandry. Agronomy 109 can replace a major course. Courses in Chemistry, Bacteriology, Botany, Crops, Accounting, Advertising, English, and Mechanics should be followed carefully to fill other groups.

1. General Farm Dairying. Designed for the student who desires a short, general course in dairying. The following will receive consideration in this study: History and present status of the dairy industry. Adaptability of various sections for dairying. Factors essential in profitable production, manufacturing, and marketing. The relation of dairying to other industries and to human welfare. Present outlook for the Dairy Industry. Methods of starting dairy herds. Breeds of cattle, cow testing associations and testing circles. Bull associations, advanced registry, boys and girls clubs, herd records. Kinds, uses and care of farm utensils. Best and most sanitary methods of handling milk. Farm manufacture of some dairy products. Testing milk and cream for chemical composition. Judging dairy products for market quality. Three lectures, one Lab. Fall quarter. Four credits.

Caine and Merrill

2. Continuation of Dairy Husbandry 1. Designed for students wanting further training in Dairying. Studies in feeding. Construction, care and arrangement of barns, milk houses and miscellaneous equipment. Cost of milk production. Marketing of milk and cream. Comparison of costs and returns obtained with different methods of marketing. Transportation of milk and cream. Three lectures, and one Lab. Winter quarter. Four credits.

Caine and Merrill

12. Breeds of Dairy Cattle. Study of history and development of all breeds of dairy cattle. Special emphasis on the various families within the breeds. Requirements for official testing. Pedigree and Herd Book Study. Three Lectures, one Lab. Winter quarter. Four credits.

Caine

109. Dairy Production. A brief review of dairy farming, and the dairy breeds. Ways of starting a dairy herd, system of herd records, selection and management of herd sires, calf feeding and management, developing dairy heifers. Winter quarter. Three credits.

Caine

110. Dairy Production. A study of pure bred cattle breeding. Care and management of dairy sires. Special emphasis on feeding for milk production. A brief study of metabolism and the characteristics of feeds and feeding standards. A thorough study of housing dairy cattle. Prerequisite, Dairy Production 109. Lectures and Lab. Spring quarter. Five credits.

Caine

111. Dairy Cattle Judging. A study of the types of the various breeds of dairy cattle. Visits to important herds. Valuation of dairy cattle. Prerequisites, Animal Husbandry 1 and 2, or Dairy Husbandry 12. Spring quarter. Two credits.

Caine

115. Seminar. Discussion and reports of current literature. Time and credit to be arranged.

216. Research. Special problems in connection with dairy production. Breeding or Feeding of dairy cattle. For seniors and graduate students. Credit will be granted according to work done. Time and credit to be arranged.

Students majoring in Dairy Manufacturing must complete the following courses: Dairy 1, 2, 3, 4, 5, 101, 103, 104, and 105. In addition, at least 8 credits must be obtained in Dairy 6, and Chemistry 107, 108 will be required. Students intending to major in Dairy Manufacturing should present an approved plan of study to the Dean of the School of Agriculture not later than the beginning of the Junior year. Students are advised to select a minor course of study in one of the following subjects: Animal Husbandry, Dairy Husbandry, Chemistry, Bacteriology, Engineering, or Commerce. Students are strongly recommended to spend at least six months in a dairy manufacturing establishment before graduation.

3. Dairy Mechanics. A study of the most common mechanical devices used in dairy manufacturing plants. Cost of producing steam. Cost of various kinds of motive power. Studies in refrigeration. Spring quarter. Two credits.

Powell and Merrill

4. Creamery Operation. Receiving and processing milk and the manufacture of butter, cheese, and ice cream in the College creamery. All quarters.

Merrill

5. **Testing and Judging Milk and Milk Products.** Special methods of testing, standardizing and judging dairy products. Inspection methods. Prerequisite: Dairy 1 or 2. Lecture and Lab. Spring quarter. Two credits.

Merrill

6. **Market Milk.** Modern sanitary methods of producing, processing and marketing milk for city milk supply. Separation of milk and standardizing cream. Fall quarter. Two credits.

Merrill

101. **Manufacture of Ice Cream and Ices.** Purchase of raw materials. Standardizing and processing. Standard commercial ice creams and ices will be considered. Registration for one credit in Creamery Operation must accompany this course. Spring quarter. Two credits.

Merrill

102. **Manufacture of Butter.** Receiving and grading milk and cream. Manufacturing of butter under creamery conditions. Registration for one credit in Creamery Operations must accompany this course. Winter quarter. Three credits.

Merrill

103. **Manufacturing of Cheese.** Receiving and grading milk. Manufacture of American cheddar, and various other standard varieties of cheese. Three lectures, two Labs. Fall quarter. Five credits.

Merrill

104. **Manufacture of Condensed and Dried Milk.** Purchase and grading milk. Modern methods of Manufacturing. Winter quarter. Two credits.

Merrill

105. **Management of Dairy Manufacturing Plants.** Forms of organization of dairy manufacturing enterprises. Construction and maintenance of Dairy buildings. Principles underlying the successful management. Advertising and marketing dairy products. Accounting records. Visits will be made to dairy plants in surrounding territory. Spring quarter. Three credits.

Merrill

106. **Special Problems.** A course for students wishing to study certain phases of dairy manufacturing. Assigned readings and laboratory work in the processing of milk and manufacturing of dairy products. Any quarter. Hours and credit to be arranged.

Merrill

201. **Research.** Research in the manufacturing of dairy products. Credit to be arranged.

Merrill

POULTRY HUSBANDRY

BYRON ALDER, Professor

1. **General Poultry.** A study of breeds, judging, breeding, incubation, brooding, housing, feeding, marketing. Designed to meet the needs of students wishing a general knowledge of the poultry industry and the problems of production, and a foundation upon which other courses are built. Three Lectures, one Lab. Winter or Spring quarter. Four credits.

Alder

2. **General Poultry.** Same as Poultry 1, except that no laboratory is given. Winter or Spring quarter. Three credits.

Alder

3. **General Poultry.** The course is planned to meet the needs of Home Economics students. Not given unless six students apply.

Alder

4. **Incubation and Brooding.** Practice work with incubator and a study of the factors which influence the hatching quality of eggs and the raising of chicks. Prerequisite, Poultry 1. Spring quarter. Two credits.

Alder

8. **Turkey Raising.** A study of the breeds, breeding, feeding, marketing, etc.

Alder

105. **Poultry Management.** The housing, care, feeding, and management of different breeds under western conditions. Prerequisite, Poultry 1. Winter quarter. Three credits.

Alder

106. **Breeds and Breeding.** The origin and development of the breeds and varieties of poultry; practice in judging; a review of the literature on breeding for utility and exhibition. Prerequisite, Poultry 1. Winter quarter. Three credits.

(Not Given 1929-30)

107. **Poultry Feeds and Feeding.** A study of nutrition problems; the feeds and methods of feeding. Prerequisite, Poultry 1, or 2. Winter quarter. Three credits.

Alder

125. **Research.** Research work in special problems. Prerequisites, Poultry 1 and 4. Time and credit to be arranged.

126. **Seminar.** Current poultry literature studied; assigned problems and special topics. Winter quarter. One credit.

Alder

127. **Poultry Practice.** Special practice at the poultry yards. Time and credit to be arranged.

Alder

VETERINARY SCIENCE

H. J. FREDERICK, Professor

10. **Veterinary Elements.** Introduction to anatomy and physiology and the common ailments of domestic animals; the most prevalent diseases, their distribution, causes, symptoms, course, diagnosis, and treatment; observation and practice in the free weekly clinics. Fall or Winter quarter. Five credits.

Frederick

15. **Indications of Disease in Animals.** General appearance, nursing, restraint, conformation and soundness, and post-mortem demonstrations. Winter quarter. Three credits.

Frederick

20, 21, 22. **Comparative Anatomy.** Especially for students in agriculture and animal husbandry; also students wishing to follow veterinary science. This course is supplemented with practical work in discussions, and illustrated by skeletons and models. Fall, Winter, and Spring quarters. Three credits each quarter. Given if ten students apply.

Frederick

40, 41, 42. **Physiology.** The vital functions of the different species of domestic animals, and those of the human body are compared; the physical and chemical laws as related to physiology, the general properties of animal cells, their origin, development, and growth; special physiology of the various organs and tissues of the animal body. Fall, Winter, and Spring quarters. Three credits each quarter. Any or all quarters may be taken.

Frederick

50, 51, 52. **Clinics.** Free clinics at the hospital in which students of veterinary science must assist. The numerous cases represent all diseases common to this locality, and furnish the clinic with abundant material for observation and practice. Fall, Winter, and Spring quarters. Hours and credits to be arranged.

Frederick

60. **Principles of Horse Shoeing.** The anatomy and physiology of the horse's foot; the form of the foot and the direction of the limb; variations in the flight of the foot; styles of going; shoeing of normal and irregular feet; winter shoeing; correction of defects in gait, and methods of shoeing hoofs defective in form, or diseased. Winter quarter. Three credits.

Frederick

70. **Poultry Diseases.** The common diseases affecting poultry in this region. Symptoms, diagnosis, prevention, and treatment. Lectures and practical demonstrations. Winter quarter.

Frederick

107. **Hygiene and Infectious Diseases.** A discussion of water and food supply, disinfection, care and management of animals, and feeding of sick animals. The common infectious diseases prevalent here. Methods which should be adopted in their control and eradication. Tests applied for diagnosis, vaccination, and serum treatment of animals. Lectures and Lab. Winter or Spring quarter. Four credits.

Frederick

118, 119. **Anatomy and Physiology.** A study of the form, structure and functions of the animal body. Attention is given to all domestic animals and students are required to locate and point out the parts related to the form, movement and utility of the animal. Fall and Spring quarters. Three credits each quarter. (Given if 10 students apply.)

Frederick

120. **Sanitary Inspection.** Inspection of slaughter houses, packing houses, butcher shops, etc., and means of detection of communicable diseases and spoilage in meat products. Prerequisite, Bacteriology 2. One quarter. Three credits. (Given if 10 students apply.)

Frederick

130, 131. **Obstetrics.** Obstetrical anatomy, reproduction, hygiene of pregnant animals. Obstetric operations, accidents of parturition, and diseases of the new-born. The college herd and the surrounding stock breeding community give ample opportunity for practical work. Winter and Spring quarters. Two credits each quarter.

BOTANY

B. L. RICHARDS, Professor; F. B. WANN, Associate Professor; *H. L. BLOOD, KATHLEEN L. HULL, Instructors; C. M. TOMPKINS, Associate Pathologist, United States Department of Agriculture.

Botany 21, 22, 30, 120, 130, 131, 240, and 241 or equivalent required for students majoring in Botany.

1. **General Botany.** A brief study of the nature and development of plants; plant parts and their functions; the food of plants; the relation of plants to human needs. Three lectures, one lab. Fall or Spring quarters. Five credits each quarter.

Hull

21, 22. **Agricultural Botany.** A general course dealing with the structure, growth, nutrition and reproduction of plants. Designed especially for students in Agriculture. Required for a major or minor in Botany. Three lectures, two labs. Fall and Winter quarters. Five credits each quarter.

Wann

23. **Plant Morphology.** Life histories and structural relationship of plants representative of the four big groups. The course is so organized as to give a broad view of the processes of evolution. Spring quarter. Three lectures and two laboratory periods. Five credits.

(Not given 1929-30)

30. **Systematic Botany.** Fundamentals of plant classification, with emphasis on flowering plants, especially economic groups. Individual practice with botanical keys. Prerequisite, Botany 1 or 21, 22, 23 or equivalent. Two lectures, one laboratory. Spring quarter. Three credits.

Richards

102. **Systematic Botany.** A continuation of course 30. Individual work with particular families or floras. Summer quarter. Two or three credits. Time to be arranged.

Richards

116. **Histological Technique.** Methods of killing and preserving botanical specimens and the preparation of permanent sections of plant material. Designed especially for teachers of Botany and research students.

Hull

120. **Elementary Plant Physiology.** A course dealing with fundamental principles of the development of the plant in relation to its environment,

*Absent on leave.

including a study of absorption, nutrition, food manufacture, metabolism, translocation and growth. Special emphasis is placed on water relations, light and temperature. Prerequisite, Botany 21, 22. Should be preceded or accompanied by organic chemistry. Three lectures, two labs. Spring quarter. Five credits.

Wann

122. Physiological Diseases of Plants. A study of the abnormalities in plant growth caused by disturbances in the physiological functions of the plant. Prerequisite, Botany 120. Spring quarter. Three credits.

(Not given 1929-30)

Wann

124. Plant Chemistry. Chemical reactions and transformations underlying the vital processes in plant life. Alternates with 121. Four credits.

(Not given 1929-30)

126. Plant Ecology. Distribution and structural adaptation of plants as affected by environmental factors. Occasional field trips. Prerequisites, Botany 120. Three lectures, one lab. Spring quarter. Four credits. Alternates with Botany 120.

(Not given 1929-30)

Wann

130, 131. Plant Pathology. Fundamental principles underlying diseases in plants. Types of diseases are so studied as to give the student a comprehensive view of the subject of plant pathology. Field and orchard crops diseases will receive particular attention during the Winter quarter, with laboratory so arranged as to permit students to select such diseases as will best support their major interests. Prerequisites, Botany 1 or 21, 22, 23. Two lectures, two labs. Fall and Winter quarters. Four credits each quarter.

Richards

133. Forest Pathology. Consists of a detailed study of the nature, cause, and control of the various diseases underlying decay of forest timber. Special attention will be given also to industrial problems connected with the staining, rotting, and preservation of wood in its various commercial forms. Two lectures, two labs. Winter quarter. Four credits.

Richards

135. Mycology. Morphology and the taxonomic relations of fungi with emphasis on economic forms. Prerequisites, Botany 1, or 21, 22, 23. Winter quarter. Four credits.

(Not given 1929-30)

Richards

221. Photographing Technique. Fundamental principles of photography as applied to advanced work in biology and plant pathology. Special attention is given to microphotography and lantern slide production. One lecture, two labs. Winter quarter. Three credits.

Richards

222. A Continuation of Course 221. Special cultural methods as applied to Plant Pathology, Physiology, and related subjects. Students may register for course 221 and 222 only by special permission. Winter or Spring quarter. Two to five credits according to work done.

(Not given 1929-30)

Richards and Wann

240, 241, 242. Seminar. Fall, Winter, and Spring quarters. Two credits each quarter. Time to be arranged.

Richards, Wann, Hull

250. Research. Open to all qualified Senior college students in Ecology, Physiology, and Pathology.

Richards, Wann, Hull, Tompkins

FORESTRY AND RANGE

L. F. WATTS, Professor; R. J. BECRAFT, Associate Professor;

CHARLES M. GENAUX, Assistant Professor.

The department of Forestry and Range was organized in 1927 as a result of a definite development of interest in the region for college training in this field. No other forestry school exists in the Intermountain Forest District, comprising Utah and large portions of adjacent states.

The course of study constitutes four-years training, comparable to that of other standard forestry schools, and graduates are awarded the Bachelor's degree in forestry. The program of courses has been carefully outlined, with advice from U. S. Forest Service officials, with pertinent subjects and competent personnel for instruction. The aim is to train men for private or government positions in (1) technical forest management, or the growing and protection of the timber crop, (2) technical range management, and (3) administrative work involving both the above; in general, conservation of renewable resources, as forests, ranges, watersheds, game.

Graduation requirements include completion of the course substantially as outlined, and attendance at Summer Camp, the first session of which is tentatively planned for the summer of 1930.

Students who expect to compete for appointments to U. S. Forest Service positions should plan ahead for Civil Service examinations. The Forest Ranger examination is usually offered each year in October. Technical examinations for Junior Forester and Junior Range Examiner are held in

March, and entrance requirements demand either four years college training, or its equivalent in experience. The course of study has been outlined to prepare students for these examinations in their senior year.

Direct training in forestry is adequately supported by fundamental courses in the sciences (Mathematics, Physics, Chemistry, Geology), and other related fields, as Botany, Zoology, Entomology, Pathology, Surveying, English, etc. For outdoor forestry the Cache National Forest with headquarters at Logan offers an excellent laboratory, and is utilized for direct contact with various forestry operations. The creditable diversity of tree species in and near Logan is being supplemented as rapidly as possible by a college arboretum. In addition, plans are under way for a nursery and for cooperation with the National government in tree distribution under the Clarke-McNary Act. Arrangements have already been made for special lectures of the U. S. Forest Service from the district office at Ogden.

It is the aim of the department to place as many students as possible in temporary positions with the Forest Service, or other training positions, during summer vacation periods.

Because of location in an Agricultural College, the major in Range Management is strongly supported by course work in allied subjects, such as Botany (general, systematic, agrostology, physiology, ecology), Agronomy (including soils), Animal Husbandry (types and breeds, beef cattle and sheep management, animal nutrition), etc. The central position in the great western grazing region provides an ideal outdoor laboratory. This is attested by the location within the state of the Salina Experiment Station of the Bureau of Animal Industry for work with poisonous plants, and the Great Basin Experiment Station at Ephraim, the Forest Service station for research in Range Management.

1. **Elementary Forestry.** General survey of the profession, character of the work, relation of forestry to welfare of the state and nation. Fall quarter. Two credits.

Watts

6. **Mensuration I.** The methods of measurement of logs, trees, and stands. The theory of log rule and volume table construction and their use in timber measurement. Three lectures, one lab. Fall quarter. Four credits.

Genaux

7. **Mensuration II.** The methods of determining the rate of growth and yields of trees and stands of timber. The relationship of growth study to timber survey and the management of the Forest. Two lectures, one lab. Winter quarter. Four credits.

Genaux

10. **Dendrology I.** An elementary course designed for first year Forestry, and any non-Forestry students in the identification of the common forest and ornamental trees of this region. One lecture, one lab. Spring quarter. Two credits.

Becraft

18. **Fire Protection.** The organization problem in fire protection, quickest and most satisfactory detection methods and the proper method of attack to control forest fires. The course is aimed to fit one to take a definite place in a fire organization. Spring quarter. Three credits.

Watts

100. **Seminar.** Current developments in forestry and range. Special lecturers, lantern slides, films. Non-credit course required of all forestry students. Time and frequency to be arranged.

Watts and Becraft

102. **General Forestry.** General survey of forestry practice, regions, tree species, management, protection, local problems. Offered for non-forestry students. Three lectures, one lab.

(Not given 1929-30)

111. **Dendrology I.** Characters and identification of broadleaved American trees, codes and keys with practical application to local species. Economic importance and distributional range of important species. Should be preceded by Systematic Botany. Two lectures, one lab. Fall quarter. Three credits.

Becraft

112. **Dendrology II.** Same as I except for Conifers. Two lectures, one lab. Winter quarter. Three credits.

Becraft

114. **Silvics (Silviculture I).** A study of the silvical characteristics of the important timber trees of the United States together with an analysis of the factors responsible for the various grouping of species in the different forest regions. The climatic and edaphic requirements of trees. Fall quarter. Three credits.

Genaux

115. **Silviculture (Silviculture II).** The care of the forest. Systems of marking timber for cutting so as to insure natural regeneration. Methods of thinning stands to stimulate the rate of growth. This course is designed to enable one to mark timber for cutting in the various types in an intelligent manner. Winter quarter. Three credits.


Genaux

116. **Planting (Silviculture III).** The reproduction or regeneration of forests by seeding and planting (artificial methods). The collection and storage of seed, nursery practice and field planting. Two lectures, two labs. Spring quarter. Four credits.

Genaux

119. **Wood Technology.** Structural and physical properties of economic woods and their indentification. Two lectures, one lab. Three credits.

Genaux

121. **Regulation (Forest Management I).** Division of the forest into working units, choice of rotation, determination of yearly cut, frequency of returns, methods of utilization, relation to market. Fall quarter. Three credits.

Watts

122. **Valuation (Forest Management II).** The value of the forest property for distinctive logging and for continued timber production. The appraisal of the value of timber and timber lands. The determination of damage due to the destruction of the forest by fire or other causes. The possibilities of forest insurance. The financial aspects of the business of growing forests. Winter quarter. Five credits.

Watts

125. **Logging (Forest Utilization I).** Various methods of handling timber from the tree to the mill. The costs of the various steps in each method, where each is best suited and the effect on the remaining forest, together with the relation between logging methods and stumpage values. Fall quarter. Three credits.

Watts

126. **Milling (Forest Utilization II).** The manufacture of logs into lumber and other sawed products. The various types of mills in use with special attention to the portable or semi-portable types. Relative merits of air drying and kiln drying of lumber. Fall quarter. Three credits.

Watts

127. **By-Products (Forest Utilization III).** The manufacture of alcohol, turpentine, and other chemical products from wood; manufacture of pulp and paper; the use of preservatives to prolong the life of wood with special reference to farm timbers, and the adaptation of wood to commercial uses with comparisons to substitutes now in use. Three lectures, one lab. Spring quarter. Four credits.

Genaux

128. **Lumber Markets.** Wholesaling and retailing. Freight rates, lumber grades, etc.

(Not given 1929-30)

131. Forest Policy. The economic aspects of the development of forestry in America and other countries, forest ownership and taxation, relationship of forests to other industries.

(Not given 1929-30)

136. Related Sources. The relationship of forestry to the watershed, and to wild life, with special reference to the perpetuation of these two related resources. Spring Quarter. Five credits. *Watts*

143. Forestry research. For advanced students. Time and credit by special arrangement. *Watts*

Summer Camp. Four weeks. Following the sophomore year all students majoring in Forestry are required to spend four weeks in summer camp in a selected portion of the Intermountain region. The entire time will be devoted to field work in mensuration, silviculture, and utilization. Six hours credit for summer camp will be allowed.

The first summer camp is being planned for 1930.

For Forest Entomology see Zoology 109.

For Forest Pathology see Botany 133.

162. Range Management. Native forage plants and their growth requirements, grazing periods, overgrazing, revegetation and grazing capacity. Adaptability of range to various classes of stock and the management of livestock on summer and winter range. Four lectures, one lab. Fall quarter. Five credits. *Becraft*

166. Range Management Plans. Detail of methods in range reconnaissance, assemblage and application of data, grazing management plans on government and on private ranges. Prerequisite, Range 162. Two lectures, one lab. Three credits.

Becraft

176. Range Forage Plants. Native forage plants, their distribution, associations, palatability, economic value, methods for research. Prerequisite, Botany 30. Three lectures, two labs. Winter quarter. Five credits.

Becraft

181. Range Economics. Development of the range industry, land utilization, control systems, range and ranch units, grazing resources and capacity, value of range forage, production costs of range livestock. Three credits.

(Not given 1929-30)

193. Range Research. For advanced students. Time and credit by special arrangement. *Becraft*

OUTLINE OF COURSES IN FORESTRY AND RANGE FRESHMAN

	F.	W.	S.
Agri. and Systematic Botany.....Bot. 21, 22, 30.....	5	5	3
Elementary Analysis.....Math. 20, 21.....	3	3	--
General Physics.....Physical.....	5	--	--
General Chemistry, Organic chem., (or chem. 3, 4, 26).....Chem. 1, 26.....	--	5	5
Elementary Forestry, Range, Fire Protection.....For. 1, 51, 18.....	2	2	3
Elementary Dendrology.....For. 10.....	--	--	2
Elective.....	2	2	4
	<hr/> 17	<hr/> 17	<hr/> 17

SOPHOMORE

Plant Physiology.....Bot. 120.....	--	5	--
Entomology, Forest Ent.....Zoo. 13, 105.....	4	3*	--
Plane Surveying and Mapping.....C. E. 1, 83, 2.....	3	3	3
Geology.....Geology.....	--	--	5
Freshman Composition.....Eng. 10, 11, 12.....	3	3	3
Market and Breed Types.....An. Husb. 4.....	--	--	3
Mensuration I, II,.....For. 6, 7,.....	4	3*	--
Elective.....	3	--	3
	<hr/> 17	<hr/> 17	<hr/> 17

*Elective for Range Students.

SOPHOMORE RANGE

Same as Sophomore Forestry, except substitute: Sheep Management, (An. Husb. 9) 3 credits for For. Entomology, and plant Physiology, (Bot. 121), 2 credits for elective in Spring quarter.

JUNIOR FORESTRY

Dendrology.....For. 111, 112.....	3	3	--
Silviculture I, II, III.....For. 114, 115, 116.....	3	3	4
(Silvics, Silviculture, Planting)			
Wood Technology.....For. 119.....	--	3	--
Utilization I, II, III.....For. 125, 126, 127.....	3	3	4
(Logging, Milling, By-products)			
Administration.....For. 132.....	--	--	3
Range, Range Mgt.....Plans Range 162, 166.....	5	3	--
Elective.....	<hr/> 3	<hr/> 2	<hr/> 6
	<hr/> 17	<hr/> 17	<hr/> 17

SENIOR FORESTRY		F.	W.	S.
Pathology, (for Path.).....	Botany 130, 131	4	3	-
Management I, II, (Regulation, Mgt. Plans).....	For. 121, 122	3	5	-
Forest and Range Policy.....	For. 181, 131	3	3	-
Lumber Markets.....	For. 128	-	-	3
Related Resources.....	For. 136	-	-	5
Research		3	-	-
Elective.....		4	6	9
		17	17	17

Required: ELECTIVE COURSES

Language.....	9 credits
Social Science.....	10 credits
Suggested for Forestry:	
Soils (Agron. 106).....	4 credits
Meteorology (Phys. 16).....	2 credits
Ecology (Bot. 126).....	4 credits
Suggested for Range:	
Genetics (Zoo. 111).....	5 credits
Beef Cattle, (An. Husb. 6)	3 credits

JUNIOR RANGE		F.	W.	S.
Plant Ecology.....	Bot. 126	-	-	4
Feeds and Feeding.....	An. Husb. 103	-	5	-
Dendrology.....	For. 111, 112	3	3	-
Silviculture.....	For. 114, 115, 116	3	3	4
(Silvics, Silviculture, Planting)				
Logging, Administration.....	For. 125, 132	3	-	3
Range, Mgt. Plans.....	Range 162, 166	5	3	-
Elective.....		3	3	6
		17	17	17

SENIOR RANGE		F.	W.	S.
Pathology.....	Bot. 130	4	-	-
Forest Management.....	For. 121, 122	3	5	-
(Regulation, Valuation, Plans)				
Range and Forest Policy.....	For. 181, 131	3	3	-
Related Resources.....	For. 136	-	-	5
Forage Plants.....	Range 176	-	5	-
Research.....	Range 193	3	-	-
Soils.....	Agron. 106	4	-	-
Elective.....		-	4	12
		17	17	17

HORTICULTURE

FRANCIS M. COE, A. L. WILSON*, Assistant Professors; EMIL HANSEN, Instructor.

The State of Utah and the Intermountain and Pacific Coast region offer excellent commercial opportunities to men with fundamental and practical horticultural training. A wide variety of fruit and truck crops for cannery and market are profitably grown in this district, and many of these offer excellent possibilities for the college trained man who plans to farm. Opportunities are also open in high school and college teaching, in experiment station and extension work, and in government service, for men with thorough training in Horticulture.

This department offers major or minor work in Pomology (fruit culture), and minor work in Olericulture (vegetable gardening) and Landscape Gardening. Emphasis is placed on the practical art, as well as on the fundamental science of Horticulture. Work in laboratories, greenhouses, gardens, and orchards of the College and surrounding country is used to supplement the lectures and recitations, and field trips are made to commercial fruit and truck farms to study practical problems at first hand.

Students majoring in Horticulture should, in addition to the Junior College courses in this department, secure a thorough grounding in Chemistry (including Organic), Botany and Plant Pathology, Entomology, and Soil Science in preparation for advanced work in Horticulture. Courses in Agronomy, Animal Husbandry, Dairy and Poultry Husbandry, Agricultural Economics and Marketing, Irrigation and Drainage, and Farm Mechanics are strongly urged to accompany course work in Horticulture. Students are urged to confer with the Professor in charge in arranging their courses of study. Recommended courses of study may be found on pages 134 and 135. Students will avoid conflicts in the schedule by adhering as closely as possible to the published course of study.

For a major in Pomology the following courses are required: 1 (or 100) 4, 5, 101, 102, 151, 152, and Seminar. Majors in General Horticulture may substitute courses approved for those listed.

1 and 100. **General Horticulture.** This course is designed to meet the needs of students in Agriculture, Commerce, and Education, and is required as a prerequisite to all courses in Horticulture, except numbers 3, 4, 5, and 6. Emphasis is placed on fruit growing. Brief elementary work in Vegetable Gardening, Landscape Gardening, Plant Propagation, and Floriculture is included.

*Absent on leave.

Lecture and recitation work on the outlook and opportunities for profitable fruit growing in Utah, propagation of fruit trees and plants, varieties and their selection, soils and sites for fruit growing, layout and planting, pruning, spraying, thinning, harvesting, grading, packing, and marketing. Brief lecture work and laboratory exercises in vegetable culture, propagation and arrangement of shrubs, perennials and annuals. Five lectures, one lab. Fall and Winter quarters. Five credits. *Coe*

3. Landscape Gardening and Floriculture. Elementary theory and practice of beautifying home grounds in the city and on the farm. Layout and design of small properties; trees, shrubs, vines, perennial and annual flowers used in ornamental gardening. Garden appreciation. Problems in improvement of home grounds, rural and urban. Home floriculture, including propagation and care of house plants. Greenhouse management. This course is designed to meet the needs of women as well as men students. Two lectures, one lab. Fall quarter. Three credits.

Hansen

4 and 104. Vegetable Production. Principles of home and market gardening; varieties, classification, culture, and marketing of commercial truck and canning crops. Senior college students will register for course 104. Winter quarter. Three credits.

(Not given 1929-30)

5 and 105. Small Fruits and Grapes. Commercial and home culture of raspberries, blackberries, currants, gooseberries, strawberries, and grapes. Soils and sites for small fruit plantations; varieties, propagation, planting, training, pruning, culture, harvesting, and marketing. Practical laboratory work in greenhouse, nursery, and field; trips to vineyards and berry farms. Three lectures, one lab. Spring quarter. Four credits.

Coe

6. Plant Propagation, Greenhouse and Nursery Practice. For both women and men students interested. Propagation of plants by seedage, layerage, division, and graftage; practical work in propagating and growing fruit, flower and ornamental plants in greenhouse, hotbed, nursery and garden. Lecture and lab. Spring quarter. Two credits.

Coe

7, 8, 9. Greenhouse Practice. Practice work in the production of greenhouse and nursery crops, including greenhouse management and outdoor nursery work according to season. Prerequisite, Course 6. Fall, Winter, and Spring quarters. One credit each quarter.

Hansen and Coe

101, 102. **Orchard Management.** Fundamental principles and practices in the production of orchard crops. Propagation and fruit tree nursery practices; variety selection; orchard location; sites and soils; planting and planting systems; cultivation, pruning, irrigation, fertilization, cover crops, thinning.

Outlook and culture of apples, cherries, peaches, pears, and plums. The underlying principles of plant science governing management practices are emphasized. Culture of grapes and berries and spraying are briefly discussed. Laboratory and problem work on orchard planning, tree planting, grafting, pruning, spraying, etc. Field trips to study management problems in commercial orchards are required.

Prerequisites, Hort. 1, Botany 22, Chem. 26. Should also be preceded by Soils and Entomology. Required in Horticulture, recommended in Vocational Agriculture. Orchard Practice, (Hort. 110) is recommended to accompany this course for students wishing additional practice work. Fall and Winter quarters. Three credits each quarter. Alternates with 151, 152.

Coe

103. **Spraying.** Fungicides and insecticides used in the control of fruit and vegetable insects and diseases; their preparation, properties and use in spraying; spray machinery and equipment, dusts and dusting; spray schedules; economics of spraying; fumigation; rodent control. Practical laboratory and field work in the preparation, mixing and application of spray materials. Problems in practical spray management. Prerequisites, Hort. 1; Chem. 1; Botany 130 (Plant Pathology); and Zool. 14; (Ec. Entomology). Lecture, lab. 3 hours, arranged. Winter quarter. Three credits.

(Not given 1929-30, unless 5 students apply)

Coe

110, 111. **Advanced Orchard Practice.** Field work in seasonal orchard operations. Fall quarter includes picking, grading and packing of fruits, and field trips to orchards in Cache and Box Elder Counties. Spring operations are pruning, renovation, grafting, planting, spraying, cultivation, irrigation and thinning. Must be preceded or accompanied by Hort. 101 and 102, Orchard Management. One credit each quarter. Given for 5 or more students.

Coe

120, 121, 122. **Advanced Landscape Gardening.** Continuation of course 3. Students work on assigned projects under supervision of instructor. Prerequisite, Hort. 3. Fall, Winter, and Spring quarters. Two credits each quarter.

Hansen

130. History and Literature of Horticulture. Brief study of the history of horticulture, survey of the literature to acquaint students with sources of horticultural knowledge. Winter quarter. Two credits.

(Not given 1929-30)

Coe

131. Subtropical Fruits and Nuts. Culture of citrus fruits, avocados, figs, dates, bananas and other tropical and subtropical fruits: walnuts, almonds, filberts, pecans and other nuts. Winter quarter. Two credits.

(Not given 1929-30)

Coe

151. Systematic Pomology. Varieties of fruits; their classification, identification, and adaptation; critical study of many varieties of fruits; the more important fruit groups and their inter-relationships. Breeding and improvement of fruit plants. Practical work in variety identification, fruit exhibition and judging. Assigned readings on fruit varieties. Staging the Horticulture Show including selection of competitive entries and participation in judging contest required as a part of this course. Prerequisite, Hort. 1. Fall quarter. Five credits.

(Not given 1929-30; given 1930-31)

Coe

152. Commercial Pomology. Problems dealing with the handling and marketing of fruits, including picking, grading, packing, transportation, storage, distribution and sale; study of buildings and equipment for packing and storing fruit; roadside and local marketing. Hort. 110, Orchard Practice, Fall quarter, is the laboratory for this course and should precede it. Prerequisite Hort. 1. Winter quarter. Five credits.

(Not given 1929-30; given 1930-31)

Coe

153, 154. Seminar. Discussion of current Horticultural topics, recent research work, reports on subjects not covered by regular courses, presentation of original papers on selected topics. Required of Senior College students in Horticulture and elective to other upper division students. All students are welcome to participate as visitors. Winter and Spring quarters. One credit each quarter.

(Not given 1929-30; given 1930-31)

Staff

155. Special Problems. Studies of advanced problems in Pomology, Landscape Gardening, or Vegetable Gardening for qualified senior or graduate students. Problem or subject selected by student. Assigned readings and research work in library, laboratory, greenhouse or field, presented as thesis. Registration by permission only. Two to five hours credit.

Coe, Wilson, Hansen

201, 202, 203, 204-a, 204-b. **Research.** Original research on horticultural problems for graduate students qualified to do investigational work in Horticulture, to be presented as graduate thesis for major or minor credit. Graduate thesis work may be used in partial fulfillment of requirements for the Master of Science degree, with major or minor in Horticulture. Re-registration until problem is completed. Registration by permission only. Course 201, Fall quarter; 202, Winter quarter; 203, Spring quarter; 204-a and 204-b, first and second Summer Sessions, respectively. Three to ten credits.

Staff

SUGGESTED COURSE FOR STUDENTS MAJORING IN HORTICULTURE

FRESHMAN YEAR

		F.	W.	S.
Botany 21, 22.....	Agricultural Botany.....	5	5	..
Bact. 1.....	General Bacteriology.....	..	..	3
Eng. 10, 11, 12.....	Freshman Composition.....	3	3	3
Econ. 50, 51.....	Gen. Economics.....	..	3	3
Hort. 1.....	Gen. Horticulture.....	5	..	..
Hort. 6.....	Plant Propagation.....	..	..	2
An. Husb. 1.....	Market Types.....	..	5	..
Poultry 1.....	Gen. Poultry.....	..	..	4
Dairy Husb. 1.....	Gen. Farm Dairying.....	4	..	..
		<hr/>	<hr/>	<hr/>
		17	16	15

SOPHOMORE YEAR

Chemistry 3, 4, 26.....	Inorganic & Organic Chem. 5	5	5	5
Zool. 13, 14, 1.....	Entomology; Gen. Zool.....	4	4	5
Hort. 3.....	Landscape Gard. & Floricul. 3	..	..	..
Hort. 4.....	Vegetable Production.....	..	3	..
Hort. 5.....	Small Fruits and Grapes.....	..	..	4
Hort. 7, 8, 9.....	Greenhouse practice.....	1	1	1
Agron. 2, 1.....	Root Crops, Cereal Crops..	4	4	..
		<hr/>	<hr/>	<hr/>
		17	17	15

JUNIOR YEAR

		F.	W.	S.
Hort. 101, 102.....	Orchard Management.....	4	4	--
Hort. 103.....	Spraying.....	--	3	--
Hort. 120.....	Adv. Landscape Gardening.....	2	--	2
Hort. 130.....	Hist. and Literature of Hort.....	--	2	--
Agron. 106.....	Soils.....	4	--	--
Bot. 130, 131.....	Plant Pathology.....	4	4	--
Eng.....	Speech.....	--	--	3
Electives.....		3	4	11
		—	—	—
		17	17	16

SENIOR YEAR

Hort. 151.....	Systematic Pomology.....	5	--	--
Hort. 152.....	Commercial Pomology.....	--	5	--
Hort. 131.....	Subtrop. Fruits & Nut Cult.....	--	2	--
Hort. 153, 154.....	Seminar.....	1	1	--
Hort. 110, 111.....	Orchard Practice.....	1	--	1
Hort. 155.....	Special Problems.....	--	--	5
Zool. 111.....	Genetics.....	5	--	--
Ag. Ec. 111.....	Marketing Agr'l Products.....	3	--	--
Eng. 125, 126, 127.....	Journalism.....	2	2	2
Ag. Ec. 101.....	Farm Administration.....	--	--	3
Electives.....		--	7	6
		—	—	—
		17	17	17

ARTS AND SCIENCE AND EDUCATION

ART

CALVIN FLETCHER, Professor; H. R. REYNOLDS, Instructor.

1. **Nature Appreciation.** Study of beauty in natural form with a view of its design. Fall quarter. Three credits.

Fletcher and Reynolds

2. **Organization and Design.** General principles of design in pattern and color, color theory, etc. Winter quarter. Three credits.

Fletcher and Reynolds

3. **Art Appreciation.** Art principles as applied to costume, interior decoration, painting, sculpture and architecture will be discussed. Spring quarter. Three credits.

Fletcher and Reynolds

31. **Commercial Art and Posters.** Design in advertising, commercial illustration, posters, displays, lettering, etc., will comprise the course. It is recommended to students of commerce, show card and illustration. Spring quarter. Three credits.

Reynolds

32. **Color.** The Enjoyment and Use of Color, by Sargent, will be used as a text. A thorough study of color will be taken up. Recommended for students in Commerce and all students specializing in art or any who desire a good understanding and appreciation of color. Winter quarter. Three credits.

Reynolds

33. **History and Appreciation of Painting and Sculpture.** Survey of the great achievements of art throughout the ages together with analysis of modern technical processes necessary to the understanding of present day paintings, sculpture, and architecture. Recommended to students of Commerce and all others interested in understanding the work of the great artists of all time. Spring quarter. Three credits.

Reynolds

122. Home planning, Construction and Design. The principles of home design, garden design, house construction, heating, sanitary equipment, etc., together with painting, color and wood finishing will comprise the course. Fall quarter. Three credits.

Fletcher

Note: Art 122, 123 and 126 may be used in Household Administration Department to apply on major.

123. Interior Decoration. Decoration and furnishing of interiors including furniture, walls, tableware, pottery, pictures, flowers and the practical assembling of all features which go to make the home beautiful. Also the historic styles of furniture and furnishing will be taken up. Four lectures, one lab. Winter quarter. Five credits.

Fletcher

124. Perspective Theory. The principles of cylindrical, parallel, and oblique perspective as used in drawing will be covered. Spring quarter. Three credits.

(Not given 1929-30)

Fletcher

125. Anatomy and Figure Drawing. Study of art form in the human figure by means of artistic anatomy and creative expression by use of the human figure. Fall quarter. Three credits.

Fletcher

126. History and Appreciation of Architecture. The characteristics of the great historic styles of building and their evolution, will be studied, with a view to developing good taste and judgment in this field at the present time. Spring quarter. Three credits.

Fletcher

STUDIO COURSES

Conducted as individual laboratory work. Three hours work each week required for each credit granted. Two, three or more credits may be taken each quarter. Students must file their studio hour schedule with the professor in charge of the course during the first week of their attendance.

All studio courses are given in the Art Studios on 3rd floor, Main building, and may be taken up in any quarter.

One or more examples of student's work may be retained during the succeeding year for exhibition.

A class in pose drawing will meet Wednesday, 2-5, during the Winter quarter.

A sketch class will be organized to work out of doors on Wednesday afternoons during the Fall and Spring quarters. Any medium within the range of the student's ability may be used. Sketching is recommended especially to painting, drawing, and illustration students.

4. **Drawing.** Free hand drawing from still life, cast and nature.

Fletcher

5. **Elementary Painting.** In water color, oil, or pastel.

Fletcher

6. **Elementary Modeling.** From antique and nature.

Fletcher

7. **Illustration.** Elementary illustration and processes for newspapers, books, and magazines.

Fletcher

8. **Embroidery Design.** Design for embroidery, lace weaving, etc.

Reynolds

9. **Historic Ornament.** Egyptian, Assyrian, Greek, French, and Renaissance may be studied.

Reynolds

10. **Elementary Show Card.** Show card and elementary sign writing.

Fletcher

11. **Pottery.** Elementary, including building, turning, glazing, firing, etc., such as may be done with limited equipment.

Reynolds

12. **China Painting.** Elementary painting processes, prerequisites: Art 1, 2, 3, or equivalent.

Fletcher

13. **Copper Work.** Simple exercises in sawing, raising, and repousse.

Reynolds

14. **Leather work.** Elementary etching, dyeing, cutting, and tooling in leather mats, purses, bags, etc.

Reynolds

15. **Basketry.** Weaving processes in reed, raffia, and grass.

Reynolds

16. **Enameling.** Work on glass, wood, ivory, etc.

Reynolds

17. **Fabric Decoration.** Elementary stenciling, tie and dye, block-printing and Batik.

Reynolds

106. **Advanced Drawing.** Life drawing from draped figures, animal drawing, and advanced antique.

Fletcher

108. **Advanced Painting.** Oil, water color, or pastel may be used.

Fletcher

109. **Advanced Modeling.** From animals or living models.

Fletcher

110. **Advanced Illustration.** Newspaper, magazine, costume and decorative illustration, illumination, poster work, or cartooning may be pursued. Opportunity is also given to pursue scientific illustration. Students will pursue one line at a time.

Fletcher

111. **Professional Design.** Design for textiles, wall paper, interior decoration, furniture, etc. One line to be taken at a time.

Fletcher

112. **Advanced Costume Design.** Prerequisites, Textiles, 105, 111.

Fletcher

113. **Advanced Show Card and Technical Sign Work.**

Fletcher

114. **Fancy Lettering and Illumination.** Pen lettering and decoration for memorials, documents, Christmas greetings, place cards, etc.

Reynolds

115. **Advanced China Decoration.** Incrusted work, enameling, lustre, and past to be taken up.

Fletcher

116. **Advanced Art Metalry—**

Reynolds

117. **Jewelry.** Sawing, wire work, filigree, stone setting, enameling, soldering, will be taken up with brooches, rings, lavalliers, pins, chains, etc.

Reynolds

118. **Advanced Leather Work.** Tooling, carving, mounting and finishing.

Reynolds

119. **Advanced Wood Ornamentation.** Carving, inlay, scraffito jesso, etc.

Reynolds

120. **Advanced Fabric Decoration.** Advanced work in Batik, dyeing, stencilling, and block-printing.

Reynolds

206. **Advanced Drawing.** From animals, life, and close anatomical analysis.

Fletcher

208. **Advanced Painting.** Landscape or portrait may be pursued.

Fletcher

209. **Advanced Modeling.** Original projects in sculpture to be carried out.

Fletcher

211. **Professional Design.** Interior decoration, or commercial design may be taken up.

Fletcher

Note: Courses in art education for Graded Schools and for High schools will be found under the Education Department.

BACTERIOLOGY AND BIOCHEMISTRY

J. E. GREAVES, Professor; H. C. PULLEY, Instructor.

1. **General Bacteriology.** This course deals with the biology and significance of bacteria. The following are considered: The development of bacteriology; the morphology and physiology of bacteria; bacteria in air, food and water, and the role they play in the arts and industries. Where possible this course should be accompanied by Bacteriology 2. Fall, Winter or Spring quarter. Three credits.

Greaves and Pulley

2. **General Bacteriology.** (Laboratory). It is desirable that this accompany Bact. 1. Breakage deposit \$2.50. Fall, Winter, or Spring quarter.

Greaves and Pulley

101. **Bacteriology.** An advanced course in special phases of bacteriology. Prerequisite, General and organic chemistry. Given in 1929-30 if called for by at least six properly prepared students. Graduate students may arrange with the professor and receive graduate credit by registering for 201. Winter quarter. Three credits.

Greaves

102. **Soil Bacteriology.** Bacteria are considered in relation to soil fertility. The class will be conducted much as a seminar. Graduate students should arrange with the professor in charge for graduate credit, and register for 202. Prerequisite, Bacteriology 1. Fall quarter. Three credits.

(Given only if registration justifies)

Greaves

103. **Soil Bacteriology.** Methods used in bacteriological investigations. Should accompany Bacteriology 102. Prerequisites, Bacteriology 1, 2, and Chemistry 103. Breakage deposit \$2.50. Fall quarter. Two credits.

Greaves and Pulley

104. **Dairy Bacteriology** (Lecture). The bacteria of milk, butter, and cheese, and their relation to disease. Prerequisite, Bacteriology 1. Winter quarter. Three or five credits.

(May not be given 1929-30)

Greaves

106. **Pathogenic Bacteriology.** The pathogenic bacteria are considered in relation to disease, the subject of immunity is stressed. Prerequisite, Bacteriology 1. Breakage deposits, \$2.50. Fall quarter. Five credits.

Greaves

111. **Biochemistry.** The transformation going on in the plant and animal. Prerequisites, Organic Chemistry. Spring quarter. Five credits.

Greaves

112. **Biochemistry.** A laboratory course which may accompany Bacteriology 111. Spring quarter. Two credits.

Greaves

113, 114, 115. **Advanced Biochemistry.** A study of the chemical transformation going on in the animal body. The class will be conducted much as a seminar. Graduate students should arrange with the professor in charge for graduate credit, and register for 213, 214, and 215. Two credits each quarter. Fall, Winter, and Spring quarters.

Greaves

116. **Sanitary Analysis.** Methods used by the sanitary inspector in examining water, milk, and other foods. Prerequisites, Chemistry 103, and Bacteriology 1 and 2. Time and credit to be arranged.

GRADUATE COURSES

207. **Research.** The laboratory and library facilities are especially arranged for advanced students in bacteriological investigation in agriculture, household science, the industries, sanitary science, and veterinary science. Time and credit to be arranged.

Greaves and Pulley

208, 209, 210. **Seminar.** Fall, Winter, and Spring quarters. Time and credit to be arranged.

Greaves

CHEMISTRY

R. L. HILL, Professor; C. T. HIRST, SHERWIN MAESER, Associate Professors.

Students desiring to major in chemistry should consult with the head of the department as soon as possible, since departmental approval is necessary for graduation. Courses 102, 103, 104, 105, 106, 112, 113, 160, are required for a major.

1. **General Chemistry.** An informational course in beginning college chemistry, designed especially for students who desire a brief applied survey of the field of inorganic chemistry. Credit in this course can not be used as a prerequisite for any course in chemistry except chemistry 26. Students majoring in chemistry or desiring premedical credit should register for chemistry 3, 4, and 5. This course should be preceded if possible by Physics 1.

Four lectures, and one demonstration and quiz period per week. Five credits. Any quarter.

Hill, Hirst, Maeser

3, 4, 5. **Inorganic Chemistry.** A more complete course in inorganic chemistry, including a beginning in qualitative analysis. Prerequisites, High School Chemistry, or Physics or Chemistry 1, or Physics 1 and 2. The course is so arranged that students who do not have time for a full year course in chemistry may get a general knowledge of the more fundamental principles in the first two terms (3, 4). Those majoring in chemistry or in other natural sciences, or doing premedical work should register also for the third term (5). Three lectures, two labs. Fall, Winter, and Spring quarters. Five credits each quarter.

Maeser

14 and 15. **Qualitative Analysis.** A course in the theory and practice of inorganic qualitative analysis. Prerequisite, Chem. 4. Winter and Spring quarters. Three credits each quarter.

21, 22. **Organic Chemistry.** Fundamental Principles of Organic Chemistry. The aliphatic and aromatic hydrocarbons, and their derivatives. Prerequisite, Chemistry 5, or Chemistry 15. Three lectures, two labs. Fall and Winter quarters. Five credits each quarter.

Hill

26. **Organic Chemistry.** An informational course in organic chemistry arranged for students who desire a brief applied course. Students majoring in chemistry or desiring premedical credit should register for Chemistry 21 and 22. Prerequisite, Chemistry 1, or 4. Four lectures and one lab. Winter or Spring quarter. Five credits.

Hill and Hirst

126. **Applied Organic Chemistry.** The application of organic chemistry to plant and animal life. This course is a brief course for students who have taken only Chemistry 1 and 26. Students with credit in Chemistry 5, and 22, should register for Bact. 111, or Chem. 112. Credit in this course is not allowed on a major in Chemistry. Prerequisite, Chem. 26. Fall quarter. Three credits.

Hill

102-103. **Quantitative Analysis.** A course in the application of theory and the fundamental principles of gravimetric and volumetric analysis to inorganic, agricultural, and food analysis. Prerequisite, Chem. 5, or 15. Winter and Spring quarters. Three credits each quarter.

Hirst

104, 105, 106. **Physical Chemistry.** See Physics 104, 105, 106.

107, 108. **Dairy Chemistry.** The chemistry of milk and milk products, including tests for adulterants, preservatives, and the routine quantitative methods of the analysis of dairy products. Prerequisite, Chem. 22. Fall and Winter quarters. Given if registration justifies. Hours and credit to be arranged.

Hill

112, 113. **Advanced Organic Chemistry.** The more important theories and reactions employed in organic chemistry. Prerequisite, Chemistry 22. Fall and Winter quarters. Two credits each quarter.

Maeser

114. **The Nitrogen Compounds.** A course devoted primarily to the proteins, alkaloids, and purine derivatives. Prerequisite, Chemistry 22. Five credits.

(Not given 1929-30)

115. Organic Preparations. An advanced laboratory course in practical laboratory methods of synthetic organic chemistry. Prerequisites, Chemistry 22, and 103. Any quarter. Credit and hours to be arranged.

Maeser

116. Inorganic Preparations. An advanced laboratory course in practical laboratory methods of synthetic Inorganic Chemistry. Prerequisites, Chemistry 5, or 15, and 103. Any quarter. Credit and hours to be arranged.

Maeser

120. Special Courses in Quantitative Analysis. Prerequisite, Chemistry 103. Winter or Spring quarter. Time and credit to be arranged.

120-A. **Water Analysis—**

120-B. **Food Analysis—**

120-C. **Soil Analysis—**

120-D. **Urine Analysis—**

120-E. **Gas Analysis—**

Hirst

160. Chemistry Seminar. Required of all seniors majoring in Chemistry. Spring quarter. Two credits.

Maeser

180, or 280. Research. Senior or Graduate students majoring in Chemistry may elect research in any branch of the subject. Time and credit to be arranged.

Staff

EDUCATION

A. H. SAXER, CALVIN FLETCHER, *ALICE KEWLEY, Professors; *HENRY OBERHANSLEY, L. R. HUMPHERYS, E. A. JACOBSEN, Associate Professors; C. E. MCCLELLAN, Assistant Professor; H. R. REYNOLDS, FRANCES BARBER, GEO. W. BATES, ALVIN HESS, Instructors.

4. Principles of Education. A study of (a) the meaning and purpose of education, formal and informal; (b) the nature of the human mind and the learning process; (c) the objectives of education as determined by the individual's needs and by the demands of the social group; (d) the nature and function of the school as an educative agency. Fall, Winter, or Spring. Three credits.

McClellan

*Absent on leave.

5. **Elementary School Curriculum.** This course is designed to familiarize prospective elementary teachers with the content of the elementary curriculum and the objectives and standards to be realized in the grades. Fall, Winter, or Spring quarters. Three credits.

Barber

6. **Educational Organization and Administration.** A brief survey of the evolution of American public schools. A comparative study of the organization and function of the different units of educational control (national, state and local); methods of raising and apportioning school funds. Special attention will be given to Utah School law and its administration. Fall, Winter, or Spring quarter. Three Credits.

Jacobsen

12, and 112. **Rural Education.** A survey and study of proposed objectives for rural schools; tendencies in curriculum revision and the organization of rural schools; the preparation of rural teachers, and the functions of the schools as agents in the solution of rural life problems. Senior College students will register for 112 and be assigned extra readings and reports.

(Not given 1929-30)

21. **Scoutmastership.** A course in the organization, management, and leadership of the Boy Scout Troop. First aid, signalling, handicraft, camping, athletics, and games, stories, trees, birds, rocks, stars, etc. The problems and the aims of the Boy Scout movement. Hikes will be arranged. Spring quarter. Two credits.

Fletcher and Scout Commission

25. **Elementary Statistical Methods.** An introduction to the Mathematical theory of statistics, together with applications in the fields of Education and Business. Prerequisite, Math. 21, or 30, or their equivalent. Spring quarter. Four credits.

Saxer

41. **Methods of Teaching Elementary Subjects.** The spontaneous purposeful activity of the child as the basic principle determining methods. Subject matter reviewed in the light of the foregoing thesis. Significance to teachers of the fact of individual differences. Consideration of school room equipment, organization and play activity. Fall, Winter, or Spring quarter. Three credits.

Barber

42. Practice Teaching. This course is for sophomores who have had educational psychology, principles of education and methods. The apprentice plan is followed which requires an initial period of observation with minor responsibility but with gradual increase of work and responsibility as trainees' ability is demonstrated. Fall, Winter, or Spring quarter. Ten credits. The quarter during which the student is to do practice teaching must be arranged for at the time of registration in the Fall quarter.

McClellan and Barber

51. Drawing for Public Schools. Methods of vitalizing the teaching of drawing in the graded schools including use of line and color media; also blackboard work. Spring quarter. Three credits.

Fletcher

52. Design and Handiwork for Graded Schools. Methods of doing and teaching design and color to children. Work in stick printing, stenciling, weaving, basketry, jesso and other crafts used to relate design and color to the crafts studied. Fall or Winter quarter. Five credits.

Reynolds

53. Handiwork for Graded Schools. Stick printing, stenciling, weaving, basketry, enameling, jesso, pottery and other crafts suited to graded schools will be taken up. Spring quarter. Three credits.

(Not given 1929-30)

Reynolds

61. Use of Books. The resources of the library and how to find them. Classification, care and use of books, and arrangement, the card catalogue and reference books. Spring quarter. One credit.

(Not given 1929-30)

110. History of Education. A brief review of the historical development of educational theories and practices from the Greeks to the present. Special emphasis will be placed upon the relation of education to the social, religious, political and industrial conditions of the period. Important educational reforms and reformers will be studied for the lessons they may teach to modern education. Fall quarter. Three credits.

Jacobsen

111. Science of Education. A study of the scientific data of education as related to the processes and methods used in high school teaching. Consideration will be given to educational values and objectives and to tests and measurements by which standards are determined. Prerequisite, Psychology 102, or 103. Fall, Winter, or Spring quarter. Three credits.

McClellan

113. Methods of Extension Work. Instensive study of the problems and functions of county agricultural agents, county home demonstration agents, agricultural specialists, home economics specialists, club agents, and state extension work; present organization and status of extension work. Field trips will be made into those parts of the state where the most successful extension work is being done. Spring quarter. Three credits.

(Not given 1929-30)

115. Practice Teaching in High School. For those preparing for Junior High School or Senior High School certification by the State. The apprenticeship plan is followed which requires a period of observation and the performance of minor duties at first with gradual increase as the trainee proves himself equal to the work. Prerequisites, Psychology 102, or 103, and Education 111. Four to eight credits. Fall, Winter or Spring quarter. Arrangements must be made at the time of registration in the Fall if training is desired at any time during the year.

McClellan, Bates, Hess

119. Methods of Teaching Home Economics. A course designed for teachers. The function of home economics in the elementary and high school. Selection of subject matter. General discussion of methods in teaching home economics. Planned to serve as an introduction to Education 120. Spring quarter. Three credits.

120. Problems in Teaching Home Economics. Teaching methods analyzed in their application to different phases of Home Economics. Study of textbooks, illustrative material, and equipment. Testing results of instruction. Prerequisite, Education 119. Students without Education 119 admitted to this course only by special permission of Instructor. Fall quarter. Three credits.

121. The Organization and Administration of Secondary Education. (a) The State Law and the regulations of the State Board of Education pertaining to public high schools; (b) high school courses of study, including the Utah State course; (c) organization, duties and activities of the teaching staff and the student body; (d) special study of the objectives of social education, including character education as applied to secondary schools and the methods of realizing these objectives. Fall, Winter, or Spring quarter. Three credits.

Jacobsen

122. Practice Teaching in Home Economics. Supervised observation of all phases of home economics teaching in various schools of the State. Each apprentice teacher is required to teach a minimum of 30 successful lessons. Round table discussions and individual weekly conferences to parallel practice in teaching. Prerequisite, Education 120. Fall, Winter, or Spring quarter. Five to eight credits.

124. Special Methods of Teaching Shop Work. The analysis and classification of trade knowledge. Establishing an effective instructional order. Methods of instruction. Lesson planning. A consideration of the various teaching devices and the Utah course of study. Problems in instructional management. Winter quarter. Five credits.

Humpherys

125. Practice Teaching in Shop Work. Supervised observation and practice teaching in various shop units in selected schools near the College. Individual conferences and round table discussion. Prerequisite, Education 124. Winter, or Spring quarter. Five to eight credits.

Humpherys

126. Methods of Teaching Agriculture. For Prospective Smith-Hughes and Agricultural teachers. The home project and agricultural job analysis will be the basis of the course. Special topics considered are: The Smith-Hughes law and how it operates in Utah; selection and arrangement of subject matter; lesson planning; management of students in class room, laboratory and field; visual and extension methods of teaching. Prerequisite, Education 111 or its equivalent. Winter quarter. Five credits.

Humpherys

127. Practice Teaching in Agriculture. Opportunity will be provided for a limited number of men to do some personally directed teaching in Smith-Hughes work in the Logan High School, North Cache High School, and the South Cache High School. Prerequisite, first three years of Smith-Hughes course. Fall, Winter, or Spring quarter. Eight credits.

Humpherys

131. Educational Tests and Measurements. An introductory course dealing with the history, principles and practices of the testing movement. Analysis of types of tests, their construction and use, with some practice in giving, scoring, and interpretation. Spring quarter. Three credits.

Jacobsen

151 Art Education for High Schools. What to teach and how to present it. Drawing Design, crafts and theory will all be considered. A basic knowledge of drawing and design is prerequisite. Required of all art majors who expect to teach in High School. Three credits.

(Not given 1929-30)

229. Educational Administration. A study of state, city, and rural school systems, with the principles underlying their organization and administration; an examination of the powers, duties, and responsibilities belonging to state and local boards of education, and upon superintendents, principals, and other school officials. A review of the literature of the field. Prerequisites, Psychology and History of Education. Winter quarter. Three credits.

Jacobsen

230. Educational Supervision. A study of the objectives, ideals, and present practices of the school; an examination of courses of study as a means of reaching desired objectives; a study of psychological principles as applied to present practices in teaching; a consideration of the technique necessary for the supervisor in determining success or failure on the part of the teacher. Specially arranged visits to teachers at work will constitute a part of the work of the course. Spring quarter. Three credits.

McClellan and Jacobsen

261, 262, 263. Seminar in Education. A study of important educational problems by the group. In addition each individual will choose, or be assigned, a special problem to be worked out by him, under direction, during the quarter. A term paper will embody the results of his work. The nature of the course is intended to make it an introduction to research methods and to thesis writing. Open to seniors and graduates who have the necessary foundation in psychology and education. Fall, Winter, and Spring quarters. Two credits each quarter.

Jacobsen and McClellan

271, 272, 273. Research in Education. This course gives opportunity to seniors and graduate students who are in a position to carry on some worthwhile piece of research in education in which they are specially interested. No regular class is held, but students receive the necessary instruction and guidance for their work through special conferences with the Instructor in charge. Time and credit to be arranged.

Jacobsen and McClellan

ENGLISH AND SPEECH

N. ALVIN PEDERSEN, FRANK R. ARNOLD, Professors; WALLACE J. VICKERS, ALMA N. SORENSEN, Associate Professors; CHARLOTTE KYLE, CHESTER J. MYERS, Assistant Professors; FRED HAMMERLY, Instructor; GEORGE C. JENSEN, RUTH MOENCH BELL, Assistants.

English A. Drill in fundamentals of preparatory English for students unprepared to take English 10. Three days a week. Fall quarter. No credit.

Jensen

9. Scientific Vocabulary. Intensive study of English word formation, derivation, synonyms, and figurative language in order to acquire a large English vocabulary, and to be able to understand scientific terms. Spring quarter. Three credits.

Arnold

10. Freshman Composition. Drill in sentence building; attention paid to grammar and correct usage; practice in organizing material.

Sorensen, Vickers, Kyle, Hammerly, Jensen, Bell

11. Freshman Composition. Expository and Argumentative writing. English 10 prerequisite for 11 and 12. Winter quarter. Three credits. Hours and teachers same as for English 10.

12. Freshman Composition. Descriptive and Narrative writing. Spring quarter. Three credits. Hours and teachers same as for English 10.

13. Children's Literature. Introduction to the prose and poetry of childhood and adolescence. The course should be helpful to teachers. Winter quarter. Two credits.

Pedersen

15. Miscellaneous Literature. Prose fiction and poetry from different ages and countries. Spring quarter. Three credits.

Pedersen

50, 51, 52. The History of English Literature. The literature of Great Britain from the Anglo-Saxon period to the present time, with emphasis upon the literature since the time of Shakespeare. To register for Winter or Spring quarter, exclusive of Fall quarter, consult instructor. Fall, Winter, and Spring quarters. Three credits each quarter.

Sorensen and Jensen

33. **The Metrical Study of Poetry.** The aim of this course is to aid students to appreciate the rhythmical values of poetry. The course will provide considerable opportunity for practice in reading poetry aloud. Fall quarter. Three credits.

Vickers

53, 54, 55. **Nineteenth Century Novel.** Class discussion and reports. French, Russian, Italian, German, English, and American novels. Fall, Winter, and Spring quarters. Three credits.

Kyle

60, 61. **Essay Reading.**

(Not given 1929-30)

Kyle

80, 81, 82. **American Literature.** From Colonial times to the present. Fall, Winter, and Spring quarters. Three credits.

Kyle

86. **Emerson.** Representative essays, speeches, poems, and the "Journal." Spring quarter. Three credits.

Sorensen

87. **Carlyle.** Reading and discussion of selected masterpieces. Fall quarter. Three credits.

Sorensen

88. **Browning.** Principally a study of Browning's monologues. Winter quarter. Two credits.

Sorensen

English 11, 12 are prerequisites for all courses in English that follow.

105. **College Grammar.** Spring quarter. Five credits.

Vickers

108, 109. **Advanced Writing.** Review of rhetorical details. Considerable freedom of choice as to type of writing. To register for Winter quarter exclusive of Fall quarter, consult Instructor. Fall and Winter quarters. Three credits each quarter.

Pedersen

111, 112. **The Eighteenth Century Novel.** Sources of the English novel and its development in the eighteenth century, with attention to its influence on the continent. Fall quarter. Five credits.

Sorensen

120, 121. **Debating.** Fall, and Winter quarters. Two credits each quarter. One additional credit is given to those who make the college debating teams.

Vickers

125, 126, 127. **Journalism.** News collecting, study of country and city newspapers, preparation of agricultural feature stories for magazines and newspapers. Students of ability may sell much of the class work to the College Department of Information-Service, thus getting much training in publicity work and in agricultural editorship. Fall, Winter, and Spring quarters. Two credits each quarter.

Arnold

130. **The Bible as English Literature.** The literature of the Bible studied in its relation to the historical, social, and religious background of the Hebrews. Winter quarter. Four credits.

Vickers

133. **Medieval Literature.** English and some continental literature of the period is studied by types: the epic, the romance, the lyric, etc. The reading is done in translation. Fall quarter. Four credits.

Vickers

134. **English Literature 1500-1660.** Emphasis is placed on the non-dramatic literature of the period. Spring quarter. Four credits.

Vickers

140, 141. **Shakespeare.** Detailed study in class of six plays: Macbeth, Henry the Fourth, King Lear, Hamlet, Othello, Twelfth Night. Collateral readings: various other Shakespearean plays as well as a biography. Fall and Winter quarters. Five credits each quarter. To register for Winter quarter, exclusive of Fall quarter, consult Instructor.

Pedersen

153. **Chaucer.** Extensive reading course. Attention is paid to pronunciation. Spring quarter. Five credits.

Pedersen

155, 156. **The Recent Novel.** A study of such writers as Bennett, Galsworthy, Wells, Anderson, Cather, Cabell. Winter and Spring quarters. Two credits each quarter. No student should register without first consulting the instructor.

Pedersen

163, 164. Modern Drama.*(Not given in 1929-30)**Pedersen***166, 167. Types of Fiction.***(Not given in 1929-30)**Sorensen***170, 171. The Short Story.***(Not given in 1929-30)**Kyle*

175. Noted Biographies. An appreciative study of great personalities in the light of their times. Boswell, Cellini, Strachey, Ludvig_ and others will be studied. Winter quarter. Five credits.

Sorensen

180, 181. Nineteenth Century English Poets. A study of the romantic and the Victorian poets. Winter quarter. Three credits.

*Kyle***184. Epic Poetry.***(Not given in 1929-30)**Vickers***SPEECH**

1. Extemporaneous Speaking. Practice in extemporaneous speaking with a definite study of those principles which make speech effective. Emphasis on delivery. Fall quarter. Five credits.

Pedersen and Myers

2. Vocal Interpretation. The vocal interpretation of the printed page. The aim of the course is to develop the ability to appreciate intellectually and emotionally any good literature, and to interpret it so that others will appreciate it. Class limited to twenty-five. Fall quarter. Repeats in Spring quarter. Five credits each quarter.

Myers

3. Extemporaneous Speaking. Continuation of Speech 1. Emphasis on speech outlines and composition. Prerequisite, Speech 1. Winter quarter. Five credits.

Myers

4. Principles of Reading. An analysis and study of the printed page. Beneficial to those who wish to read effectively either orally or silently. Of value to teachers of reading. Winter quarter. Five credits.

Myers

5. **Speech Technique.** Special attention is to be given to voice science, gesture, breathing, posture, and phonetics. A course which aims at ease in cultural speech; for those who are interested in coming before the public in any form of speech work. Required of all those who take any senior college speech work. Class is not limited. Spring quarter. Three credits.

Myers

6. **Dialect.** A study of the dialect forms of such writers as Burns, Kipling, Drummond, Riley, Daly, Dunbar, Harris, and Kirk. A course for those who desire a knowledge of the monologue and the use of various dialectic forms. Spring quarter. Five credits.

Myers

101. **Advanced Public Speaking.** Practice in the making and delivery of speeches adapted to various audiences and occasions. The psychological aspects of speech making are also studied. Prerequisites, Speech 1, 3, 5. Winter quarter. Five credits.

Pedersen

102. **Play Production.** Study and production of plays. Attention is given to work in the art of stage make-up, stage technique, technique of acting, prompt books, miniature stages, costumes, and lights. Knowledge applied to campus productions. Prerequisites, Speech 2, 4, 5. Fall quarter. Five credits.

Myers

104. **Platform Reading.** An analytical study of oral literary forms, emphasizing the differentiation of such forms. The course deals with both dramatic and non-dramatic material. Prerequisites, Speech 2, 4, 5. Spring quarter. Five credits.

Pedersen and Myers

GEOLOGY

WILLIAM PETERSON, Professor; REED W. BAILEY, Assistant Professor.

1. **Geology and Geography of Utah.** This course is planned especially to give the student a knowledge of the state, its mountains and valleys, rivers and lakes, and how they came to be. The geological processes such as running water, wind, and moving ice, that have operated in this intermountain region, and modified the land forms, will be studied. There will be a brief study made of the geological history of the state, of the sequence of events that

have led up to its present form, and the ancient life that lived here. This work will also include a study of the National parks and monuments in the State. Special reports and field trips will be required. Fall quarter. Five credits.

Bailey

5. The Natural Economic Resources of Utah and their Utilization. Includes a study of land and water relationships, water power, timber, and metal and mineral deposits, as they have influenced the industry of the area. Special study will be given to the geographic distribution and economic importance of deposits containing gold, silver, iron, copper, zinc, manganese, clay, gypsum, coal, sulphur, cement, lime, gilsonite, elaterite, oil shale, oil, salt, alunite, phosphate, sulphate, etc. Winter quarter. Five credits.

Peterson

10. Engineering Geology. General principles of geology and their application to engineering problems. A study will be made of the materials of the earth, such as rock, gravel, sand, and clay; of structural features of the earth's crust; of maps representing these materials and structures, with their application to the construction of roads, dams, and canals, and the development of water supply, drainage, etc. The course will consist of four lectures and one laboratory period. Winter quarter. Five credits.

Bailey

12. Forest Geology. Planned specially for the student in forestry. It will include physiography, a study of land forms and the processes which made them, such as running water, wind, weathering, and moving ice, (glaciers), the formation of forest soils and the rocks from which they come. A study of topographic maps will be made. Spring quarter. Five credits.

Peterson

105, 106. General Geology. Physical and Historical Geology. A study of the materials making up the earth's crust, their arrangement and origin. Also, a study of the dynamic agents, such as wind, running water, moving ice, volcanic activities, etc., which operate upon the earth and modify its outer portion. A study of the sequence of events which have happened to the earth in the past as revealed by the rocks and fossils. A review of the building of the continent with its mountain ranges, and the succession of life which has inhabited the earth. Field trips will be required. Prerequisites, College Chemistry, and Zoology. Winter, and Spring quarters. Five credits each quarter.

Bailey

108. **Economic Geology.** The first part of the course will deal with the non-metals, with special emphasis on mineral fertilizers and coal; the second part, with metals, such as iron, lead, zinc, copper, gold, and silver, and their economic use. Prerequisite: General Geology. Winter quarter. Five credits.

(Will be given 1930-31)

Bailey

110. **Common Minerals and Rocks.** The origin and formation of the different kinds of rocks, both sedimentary and igneous, and of about seventy-five minerals with methods for their determination. Prerequisite, General Geology. Three lectures, two labs. Fall quarter. Five credits.

Bailey

111. **Geology of Ground Water.** A study of structure to determine the cause of springs, artesian wells, etc. Structural characteristics that will yield water, either through tunneling or boring. Prerequisites, Geology 105, 106, and Physics 1, 2. Spring quarter. Five credits.

Peterson

113. **Paleontology.** Life succession as found in fossil record. Special emphasis will be placed on the origin and the development of the mammals of today. Spring quarter. Five credits.

Bailey

114. **Field Methods.** Necessary in mapping the detailed geology of an assigned area. Fall and Spring quarters. Time and credits to be arranged.

Peterson and Bailey

120. **Structural and Metamorphic Geology.** A description and interpretation of structural features found in the earth's crust. Structures related to Ground Water, and Mining and Oil development will be emphasized. Regional structures such as mountain ranges will be studied. Metamorphic rocks and their origin will be a part of the course. Prerequisite, General Geology. Five credits.

(Given in 1930-31)

Peterson and Bailey

HISTORY

JOEL E. RICKS, Professor; MILTON MERRILL, Instructor

1, 2, 3. **European History.** Survey of European History from the fall of Rome to the present. Fall, Winter, and Spring quarters. Five credits each quarter.

Merrill

13, 14, 15. **United States History.** Survey of United States History from the earliest times to the present. Fall, Winter, and Spring quarters. Five credits each quarter.

Ricks

120. **European History.** A study of the Renaissance in all of the Western countries. Fall quarter. Three credits.

Ricks

121. **European History.** The Reformation movement in Germany, France, Switzerland, Scotland, and the Scandinavian countries. Winter quarter. Three credits.

Ricks

130, 131, 132. **English History.** From the earliest times to the present. Fall, Winter, and Spring quarters. Three credits each quarter.

Ricks

157, 158, 159. **United States History.** From 1850 to the present time. Fall, Winter, and Spring quarters. Three credits each quarter.

Ricks

197, 198, 199. **Seminar in United States History.** Required of all seniors majoring in History. Fall quarter. One credit. Winter quarter. One credit. Spring quarter. Three credits.

Ricks

MATHEMATICS

A. H. SAXER, Professor; *EDMUND FELDMAN, LeGRANDE HUMPHERYS, Associate Professors; ROY EGBERT, Assistant Professor; V. H. TINGEY, Instructor.

20, 21. **Elementary Analysis.** A course arranged for students who can take but one year of mathematics, and who have presented but one unit of algebra for entrance. Graphical methods for presenting facts. Relation of the graph to algebra, arithmetic, and geometry. Detailed analytical discussion of the linear equation. Graphical and algebraical solution of triangles. Trigonometry and use of trigonometric tables. Use of logarithms, slide, rule, etc. Prerequisite, one year of high school algebra. Fall and Winter quarters. Three credits each quarter.

Egbert

*Absent on leave.

25. **Elementary Statistical Methods.** An introduction to the mathematical theory of statistics together with application in the fields of Education and Business. Prerequisite, Math. 21, or 30, or their equivalent. Spring quarter. Four credits.

Saxer

30. **Algebra.** This course is designed to meet the needs of students in engineering who present but one unit of algebra and one unit of geometry for entrance. This course prepares for Mathematics 31 and 45 which follow, and should not be taken by those who present $1\frac{1}{2}$ units of algebra. Fall, Winter, or Spring quarters. Five credits.

Tingey, Egbert, Humpherys

40. **Solid Geometry.** Prerequisites: $1\frac{1}{2}$ units of High School algebra and plane geometry. Fall, Winter, and Spring quarters. Two credits each quarter.

(Not given 1929-30)

45. **College Algebra.** Prerequisite, $1\frac{1}{2}$ units of High School algebra, or Mathematics 30. Winter quarter. Five credits.

Tingey

46. **Trigonometry.** Prerequisite, Math. 45. Spring quarter. Five credits.

Tingey

47. **Elementary Calculus.** An introduction to differential and integral calculus, including a thorough introduction to Analytic Geometry. Prerequisite, Math. 46. Fall quarter. Five credits.

Saxer

60. **The Mathematical Theory of Investment.** Prerequisite, Mathematics 21 or 30. Fall quarter. Three credits.

(Not given 1929-30)

61. **Probability and Life Insurance.** A continuation of Mathematics 60. Prerequisite, Mathematics 60. Winter quarter. Three credits.

(Not given 1929-30)

118, 119. **Differential and Integral Calculus.** A continuation of Course 47. Winter and Spring quarters. Five credits each quarter.

Saxer

120. Advanced Analytical Geometry. With applications. Prerequisite, Mathematics 119. Fall quarter. Three credits.

Saxer

121. Advanced Calculus. Together with applications to engineering and the sciences. Prerequisite, Mathematics 120. Winter quarter. Three credits.

Saxer

122. Differential Equations and Their Applications. Prerequisite, Mathematics 121. Spring quarter. Three credits.

Saxer

160, 161, 162. Seminar in Mathematics. Arranged for students majoring in mathematics, honors candidates, and graduate students. Advanced topics in Analytical Geometry, Calculus, Differential Equations, and Statistical Methods may be chosen. Any quarter. Time and credit to be arranged.

Saxer

MODERN LANGUAGES AND LATIN

F. R. ARNOLD, Professor; FRED HAMMERLY, Instructor.

FRENCH

1, 2, 3. First Year French. Walther and Ballard's Beginner's French for grammar and conversation. About 800 pages of modern prose are read. Fall, Winter, and Spring quarters. Five credits each quarter.

Arnold

101, 102, 103. Second Year French. Dictation and original composition. History of France by Lavissee. Study of French literature of the nineteenth century with reading of about 600 pages from Victor Hugo, Daudet, and Loti. Fall, Winter, and Spring quarters. Three credits each quarter.

Arnold

104, 105, 106. French Conversation and Composition. Weekly debates in French on such subjects as militarism, education, country towns, and college pleasures. Writing up of each debate in French. Prerequisite, Two years of college French or three years of high school. Fall, Winter, and Spring quarters. One credit each quarter.

Arnold

110, 111, 112. **Research Work in French Periodicals and Books,** on any one of the following subjects:

- (a) Landscape gardening.
- (b) Percheron horses.
- (c) French finance.
- (d) French scientific reports.
- (e) Home economics.
- (f) Aviation.

The work will consist of outside reading and weekly reports to the instructor. Prerequisites, Two years of college French, or three years of high school. Fall, Winter, and Spring quarters. Hours and credits to be arranged with instructor.

Arnold

113, 114, 115. **Reading Course in Classic Plays of Seventeenth Century in France.** Fall quarter, plays of Corneille. Winter quarter, plays of Racine. Spring quarter, plays of Moliere. Prerequisite, two years of college French. Two credits each quarter.

(Not given 1929-30)

Arnold

116, 117, 118. **Reading Course in Romantic Plays from "Hernani" to "Cyrano de Bergerac."** Prerequisite, two years of college French. Fall, Winter, and Spring quarters. Two credits each quarter.

Arnold

LATIN

1, 2, 3. **Grammar and Reading.** And study of English vocabulary. Fall, Winter, and Spring quarters. Three credits each quarter.

Arnold

9. **Scientific Vocabulary.** Intensive study of English word formation, derivation, synonyms, and figurative language in order to acquire a large English vocabulary, and to be able to understand scientific terms. Spring quarter. Three credits. See English 9.

Arnold

GERMAN

1, 2, 3. **First Year German.** Grammar, reading, and conversation. Fall, Winter, and Spring quarters. Five credits each quarter.

Hammerly

101, 102, 103. **Second Year German.** Reading of modern texts, grammar, composition. Fall, Winter, and Spring quarters. Three credits each quarter.

Hammerly

104. **Scientific German.** Reading of Scientific texts. Specially recommended for students who are planning to do advanced work in the sciences, or who are working for advanced degrees. Prerequisite, two years of college German. Fall quarter. Two credits.

Hammerly

105, 106. **Research work in German in German Periodicals and scientific books in the following subjects:**

- (a) Chemistry.
- (b) Medicine.
- (c) Biology.
- (d) Botany.
- (e) Agronomy.
- (f) Sociology.

Prerequisite, German 104. Winter and Spring quarters. Two credits each quarter. Additional credits may be arranged with instructor.

Hammerly

107, 108, 109. **Detailed study of Goethe's Faust.** Prerequisite, two years of college German. Fall, Winter, and Spring quarters.

(Not given 1929-30)

121, 122. **Reading Course in Schiller's and Lessing's plays.** Especially recommended for literary students and returned missionaries. Prerequisite, two years of college German. Winter and Spring quarters. Two credits each quarter.

Hammerly

SPANISH

1, 2. **First Year Spanish.** Grammar, conversation, and reading. Fall and Winter quarters. Four credits each quarter.

Mr. Davis

3. **Spanish.** Business* correspondence, reading, and conversation. Spring quarter. Four credits.

Mr. Davis

MUSIC

BRIGHAM CECIL GATES, Professor; WALTER WELTI, Assistant Professor;
CLARENCE J. HAWKINS, Band Master.

ASSOCIATED TEACHERS

William Spicker, Violin.

Albert J. Southwick, Vocal.

Samuel E. Clark, Piano.

Mrs. Walter Welti, Piano.

Mrs. Frances Winton Champ, Piano.

N. W. Christiansen, Violin.

A. L. Farrell, Vocal.

All students majoring in Music must be proficient on at least one instrument or voice. Enough instruction must have been taken to reach the required standard. (The head of the department should be consulted at least three quarters before graduation in relation to the foregoing.) In addition, a department major must include for instrumentalists Music 109, 110, 111, 112, (harmony) 121, 122, (band and orchestra arranging); for vocalists, music 109, 110, 111, (harmony) 30, 31 (public school music.)

1. Elementary Theory. Preliminary to the study of Harmony, Public School Music, and other technical subjects. Reviews the ground work necessary for students desiring a thorough knowledge of music. Keys, scales, intervals, melody writing, sight reading. Fall quarter. Three credits.

Welti

4, 5, 6. Appreciation and History of Music. From text. This course deals with the history of music from its beginning to the present. Fall, Winter, and Spring quarters. Three credits each quarter. No credit will be given for less than two consecutive quarters.

Welti

15, 16, 17. Orchestra Combinations. Students may enter this course by permission of the teacher only. Instrumental trios, quartetts, etc. for ensembling training. Students taking this course will be required to furnish music for assemblies and school functions. Fall, Winter, and Spring quarters. One-half credit each quarter. Time to be arranged.

Gates

18, 19, 20. **Symphony Orchestra.** Provides training and practical experience in a wide range of orchestral work. Students are required to play at all public appearances of the orchestra. Fall, Winter, and Spring quarters. One and a half credit each quarter.

Gates

21, 22, 23. **Chorus.** To furnish music for chapel exercises and special occasions. Three hours a week. Fall, Winter, and Spring quarters. One credit each quarter.

Wolti

24, 25, 26. **Male Glee Club.** Fall quarter open to all male singers. Membership is limited in number; consult instructor. Fall, Winter, and Spring quarters. One credit each quarter.

Wolti

27, 28, 29. **Ladies Chorus.** Open to all women singers. Membership is limited; consult instructor. Fall, Winter, and Spring quarters. One credit each quarter.

Wolti

30, 31. **Public School Music for Grade Teachers.** To prepare teachers to teach music in the grades. The fundamentals of music and how to present them to children, emphasizing singing and song material. Care and development of the child voice. Winter and Spring quarters. Three credits.

Wolti

40. **Beginner's Band.** For students needing preparatory work for the regular school band. Fall quarter. One-half credit.

Hawkins

41, 42, 43. **Band.** To provide for study and practice of band instruments, and to furnish music for athletic meets and out-door gatherings. Fall, Winter, and Spring quarters. One credit each quarter.

Hawkins

44, 45, 46. **Brass Quartetts.** (Students may take this course by permission of the teachers only). Students taking this course will be required to play for school functions. Fall, Winter, and Spring quarters. One-half credit each quarter.

Hawkins

109, 110. **Elementary Harmony.** Prerequisite, Ability to read music well at sight. Unless students have had good training in the fundamentals, Music 1 should be taken as a preliminary study to harmony. Chord construction up to modulation. Winter and Spring quarters. Three credits each quarter.

Gates

111, 112. **Advanced Harmony.** Prerequisites, Music 109, 110. Chord construction including modulation, secondary sevenths, mixed chords. This course leads to a practical knowledge of this subject, useful for any instrument, vocal, arranging, or composition. Fall, and Winter quarters. Three credits each quarter.

Gates

121. **Band Instrumentation and Arranging.** Prerequisites, 109, 110, and the ability to play at least one instrument well. This course is designed to give students a knowledge of the band instruments, their range, character, and transpositions. It will also teach practical arranging for the same. Winter quarter. Two credits.

Hawkins

122. **Orchestration and Arranging.** Prerequisites, 109, 110, and the ability to play one orchestral instrument well. Students should also take 121. Designed to give students a theoretical knowledge of all orchestral instruments, range, character and transposition and teach practical arranging for large and small orchestras. Spring quarter. Two credits.

Hawkins

130. **Conducting.** The art and technique of the baton. Time beating, interpretation, etc. Fall quarter. One credit.

Gates

Private Instruction Courses

(Note:—The following subjects are given in private lessons only. Special fees are charged, ranging from \$1.00 to \$2.50 per lesson, varying with the different teachers and subjects.)

50, 51, 52. **Private Piano Lessons.** (A minimum of 6 hours practice a week for one lesson, and 12 for two lessons). For one lesson a week, one and one-half credits each quarter. For two lessons a week three credits each quarter. Time to be arranged.

Gates and Associated Teachers

53, 54, 55. **Private Vocal Lessons.** For one lesson a week, one and one-half credits each quarter. For two lessons a week three credits each quarter. Time to be arranged.

Wells and Associated Teachers

56, 57, 58. **Brass and Wood Wind Instruments.** A minimum of six hours practice a week for one lesson, and twelve hours for two lessons. For one lesson a week, one and a half credits each quarter. For two lessons a week, three credits each quarter. Time to be arranged.

Hawkins

123. **Advanced Band Instrumentation and Arranging.** Continuation of 121. Given in private or class lessons. One and one-half credits each quarter. Time to be arranged.

Hawkins

124. **Advanced Orchestration and Arranging.** Continuation of 122. Given in private or class lessons. One and one-half hours credits each quarter. Time to be arranged.

Gates

130, 131, 132. **Counterpoint.** Study of polyphonic music writing. A continuation of advanced harmony. Prerequisites, 109, 110, 111, 112. Given in private lessons only. One and one-half hours credit each quarter for one lesson a week. Time to be arranged.

Gates

134, 135, 136. **Composition.** The study of the methods of music writing. Small forms and development. Prerequisites, 109, 110, 111. Given in private lessons only. One and one-half credit each quarter. Time to be arranged.

Gates

PHYSICAL EDUCATION

W. B. PRESTON, CHRISTINE B. CLAYTON, Professors; JOS. R. JENSON, CATHARINE C. CARLISLE, Associate Professors; E. L. ROMNEY, Director of Athletics; CHARLOTTE E. DANCY, Assistant Professor.

Because Physical Education determines capacity for efficiently carrying out work which a student prepares for in College, it is being emphasized more and more each year.

At the beginning of every school year each student is given a medical and physical examination so that he can be adjusted properly to his physical activities.

Physical Education is required in the Utah State Agricultural College for six quarters. One credit hour is given for each quarter.

Freshmen are required to meet twice a week for corrective gymnastics. Sophomores meet twice a week for advanced activity courses, which may be elected.

THE COLLEGE HEALTH SERVICE

The Health Service is maintained primarily for the care of students who may become ill during their stay on the campus. It is also looked upon as an educational department to teach preventive medicine and hygiene. Through its consultations, examinations, and advice it attempts to point out the causes of ill health, and to present clearly the fundamental laws of good health.

PROFESSIONAL COURSES IN PHYSICAL EDUCATION

Because of the great demand for trained leaders in community recreation and playground managers, for directors of physical education in high schools, high school coaches, etc., this department offers an opportunity to major or minor in physical education and also to meet the state requirements for certification of teachers of physical education and coaching in high schools.

PHYSICAL EDUCATION FOR MEN

1, 2, 3. **Freshman Gymnastics and Games.** Designed to furnish activity of such kind and in such a way as will insure correct posture and physical efficiency. Required of all Freshmen. Every quarter. One credit each quarter.

Jenson and

4, 5, 6. **Sophomore Gymnastics.** A continuation of Physical Education 1 with emphasis on more advanced types of gymnastics and heavy apparatus. Every quarter. One credit each quarter.

Jenson

8, 9, 10. **Individual Gymnastics.** The work of this course is given for those students who are physically unable to take Physical Education 1, 2, 3, 4, 5, 6. It is arranged to meet the needs of the individual students, as indicated by the physical examination and study of personal tendencies. Fall, Winter, and Spring quarters. One credit each quarter. Hours to be arranged.

Jenson

PHYSICAL EDUCATION FOR WOMEN

13, 14, 15. **Freshman Gymnastics.** This course consists of marching, natural gymnastics, dancing, athletic activities, and games. Required for graduation. Fall, Winter, and Spring quarters. One credit each quarter.

Carlisle and

16, 17, 18. **Advanced Gymnastics.** A study of advanced exercises, gymnastics, marching, apparatus work, and teaching methods. Fall, Winter, and Spring quarters. One credit each quarter.

Carlisle

19, 20, 21. **Individual Gymnastics.** This course is given for those students physically unable to take the required work in physical education. It is arranged to meet individual needs, as shown by physical examination and study of personal tendencies. Fall, Winter, and Spring quarters. One credit each quarter. Hours to be arranged.

Carlisle

PROFESSIONAL COURSES

31, 32, 33. **Natural Dancing.** For women. This course consists of dancing based on natural movements. It offers opportunity for music interpretation and pantomimic dancing. Fall, Winter, and Spring quarters. One credit each quarter.

Carlisle

41, 42, 43. **Elementary Folk Dancing.** For men and women. Includes study of fundamental dance steps, simple folk and national dances, and the presentation of dance material to different age groups. Particularly suited to needs of Two-year Normal students. Fall, Winter, and Spring quarters. One credit each quarter.

Carlisle

81, 82, 83. **Competitive Athletics.** For women. Includes practice and methods of coaching sports and athletics for girls. Baseball, basketball, archery, volley ball, tennis, track and field events, arranged seasonally. Fall, Winter, and Spring quarters. Two credits each quarter.

Carlisle and

91, 92, 93. **Swimming.** For women. This course covers elementary and intermediate work in swimming. Fall, Winter, and Spring quarters. One credit each quarter.

94. **Advanced Swimming.** For women. This course covers advanced swimming, diving and life saving. Winter quarter. One credit.

64. **Clogging and Gymnastic Dancing.** For men. Elementary work in clogging, gymnastic and athletic dancing. Material suitable for presentation to boys in the elementary and high schools. Spring quarter. One credit.

Carlisle

71. **The Dramatic Game.** For women. This course takes up the fundamental play rhythms and music and singing games, showing their historical and racial significance; the development of simple folk dances from singing games; trade dances; Indian dances; pantomimes and ceremonies. Fall quarter. Two credits.

Carlisle

72. **Theory and Practice of Plays and Games.** For men and women. A study of play periods and material appropriate for each period. The selection of play material is considered, together with methods of presentation in the elementary school and on the playground. Winter quarter. Three credits.

Carlisle

73. **Community Recreation Leadership.** For men and women. Consists of lectures and practical work. Lectures will consider selection of suitable material, and methods of handling various groups. The practice hour will take up games and folk dances. Spring quarter. Two credits.

Jenson

74. **Advanced Swimming.** For men. A continuation of course 3. The student will be required to pass certain standard tests. Winter quarter. Two credits.

Jenson and

75. **Competitive Activities.** A course designed to teach students to play basketball, volley ball, tennis, baseball, soccer, football; also the organization of internal athletics, leagues, etc. Fall quarter. Two credits.

Jenson

76. **Advanced Gymnastics.** A study of methods of teaching gymnastics, such as parallel bars, side horse, rings, Indian clubs, as well as advanced floor work in calisthenics. Winter quarter. Two credits.

Jenson

77. Personal Hygiene for Men. Lectures covering personal and general hygiene, including care of skin, hair, teeth, nails; care of special senses as eye, ear, nose, and throat; study of rest, exercise, and recreation. Fall quarter. Two credits.

Jenson

106. Applied Anatomy and Physiology of Exercise. Prerequisite, Physiology 4. Fall quarter. Five credits.

Carter

108a. Corrective Gymnastics for Women. Prerequisite, Physical Education 106. Open to Juniors and Seniors only. This course gives theory of exercise for correction of the common physical defects,—spinal curvature, flat feet, and all postural difficulties. Winter quarter. Two Credits.

Carlisle

108b. Practice in Corrective Gymnastics. Practical application of material studied in Physical Education 108a. Spring quarter. One credit. Two hours a week, to be arranged.

Carlisle

109. Corrective Gymnastics. For men. Open to Juniors and Seniors. This course is devoted to the application of gymnastics for the correction of such common defects as flat feet, spinal curvature, poor posture, etc. Prerequisite, Physical Education 106. Spring quarter. Three credits.

Jenson

111. Nutrition. For Athletes and Physical Education Majors. For description, refer to Department of Foods and Dietetics. Fall quarter. Two credits.

Clayton

120. Methods of Coaching. For men. A theoretical consideration of training and coaching of men's athletic teams. Fall, Winter and Spring quarters. One credit each quarter. Time to be arranged.

Romney

134, 135, 136. Advanced Natural Dancing. A continuation of Physical Education 31, 32, 33. This course also includes methods of teaching musical interpretation through natural movement. Fall, Winter, and Spring quarters. One credit each quarter.

Carlisle

144, 145, 146. **Advanced Folk Dancing.** A continuation of Physical Education 41, 42, 43. More elaborate Folk dances are taught in this course, which also includes clogging, program dances, and a consideration of Pageant and Festival production. Fall, Winter, and Spring quarters. One credit each quarter.

Carlisle

151. **Principles of Physical Education.** A study of the principles upon which physical education is based; the place of physical education in our modern educational scheme; a brief consideration of the organization and administration of a department of physical education. Fall quarter. Three credits.

Carlisle

152. **Methods of Teaching Physical Education.** A study of physical education activities and methods of presentation. Planned as an introductory course to Education 115. Winter quarter. Three credits.

Carlisle

161. **Principles of Physical Training for Men.** Open to Juniors and Seniors. This course includes a comparison of the various systems of Gymnastics teaching in vogue today; also, the objective of Physical Education. Special attention is given to consideration of high school course of study. Prerequisites, Physical Education 73, 74, 75, 76, 77, 106. Winter quarter. Five credits.

Jenson

170. **Physical Diagnosis and Measurements.** For men and women. This course aims to train the prospective physical director to detect the common physical defects. Instruction is given in methods of taking measurements, and in strength tests. Prerequisite, Physical Education 106. Spring quarter. Three credits.

Preston

For other required and closely related courses see:

Textiles 105.

Bacteriology 1, 2.

Physiology and Public Health 4, 14, 107, 108, 109.

Zoology 1, 111, 112.

PHYSICS

FRANK L. WEST, WILLARD GARDNER, D. S. JENNINGS, Professors; *N. E. EDLEFSON, Assistant Professor.

1, 2. General Physics. A lecture demonstration course, designed for students not majoring in Physics or Engineering and requiring a minimum of mathematics. It includes mechanics, heat, electricity and magnetism, sound and light with their most interesting applications to industry and to life. Fall and Winter or Winter and Spring quarters. Five credits each quarter.

West

10. General Astronomy. Prerequisite, General Physics. Spring quarter. Five credits.

(Not given 1929-30)

West

16. Meteorology, or Physics of the Atmosphere. The methods of weather observation, predictions, frost warnings and the relation of climate to man, to forestry and to agriculture. Prerequisite, Elementary physics. Spring quarter. Two credits.

West

20, 21, 22 Mechanics, Molecular Physics, Electricity and Magnetism, Heat, Light and Sound. Prerequisite, High School physics. Three lectures and two labs. Fall, Winter, and Spring quarters. Five credits each quarter.

Gardner

104, 105, 106. Physical Chemistry. Including atomic, kinetic and electron theories, gaseous, liquid and solid states; solutions, thermo-chemistry, electro-chemistry, radio-activity and elementary thermo-dynamics. General physics, chemistry, calculus and Physics 107 should precede or accompany this course. Fall, Winter and Spring quarters. Three credits each quarter.

West

107. Physical Chemistry Laboratory Work. Fall, Winter and Spring quarters. One credit each quarter.

Jennings

108 Advanced Laboratory Work. Electricity and magnetism, or physical chemistry. One to five credits each quarter. Recommended to students majoring in physics. Fall, Winter, and Spring quarters. Time to be arranged.

*Absent on leave.

Gardner

110, 111. **Direct and Alternating Current Electricity and its Application to Industry.** Winter and Spring quarters. Two credits each quarter.

Gardner

112. **Elementary Electrical Engineering.** For engineering students and majors in physics. Spring quarter. Four credits. (See C. E. 197).

(Not given 1929-30)

West

118. **Thermodynamics, for Engineering Students.** Fall quarter. Four credits. (See C. E. 196).

West

119, 120. **Kinetic Theory, Atomic Structure and Thermodynamics Applied to Chemistry.** Winter and Spring quarters. Two credits each quarter.

West

150, 151, 152. **Applied Mechanics for Engineers.** Prerequisite, Calculus. Fall, Winter and Spring quarters. Five credits each quarter. (See C. E. 101, 102, 103).

Clyde

190, 191, 192. **Theoretical Physics.** An introduction to mathematical physics. Prerequisites, Physics 20, 21, 22, and Calculus. Fall, Winter, and Spring quarters. Three credits each quarter.

Gardner

225, 226, 227. **Seminar.** Prerequisite, Calculus. Fall, Winter, and Spring quarters. Two credits each quarter.

Staff

One of the following courses will be given each year:

209, 210, 211. **Theoretical Mechanics.**

Led by Gardner

212, 213, 214. **Hydrodynamics.**

Led by Gardner

215, 216, 217. **Mathematical Theory of Electricity and Magnetism.**

Led by Gardner

218, 219, 220. **Atomic Structure, Thermodynamics, and Physical Chemistry.**

Led by West

PSYCHOLOGY

HENRY PETERSON, Professor; ERNEST A. JACOBSON, Associate Professor.

2. **Elementary Educational Psychology.** Open to Freshmen and Sophomores who have had an introductory course. Adapted for teacher certification. Spring quarter. Five credits.

3. **Elementary Educational Psychology.** Open to all Freshmen and Sophomores. Meets requirements for certification of elementary teachers. Fall, Winter or Spring quarter. Five credits.

101. **Principles of Psychology.** Open to all Juniors and Seniors. Deals with the science of human behavior. Fall or Winter quarter. Three credits.

102. **Advanced Educational Psychology.** Open to all students who have taken Psychology 101 or equivalent. Prepares for teaching in high school and junior high school, and for leadership in other capacities. Winter or Spring quarter. Three credits.

103. **Psychology of Adolescence.** Open to students who have had Psychology 101, or equivalent. A study of the behavior of adolescents. Fall or Spring quarter. Three credits.

*105. **Experiments in Educational Psychology.** Prerequisite, Psychology 101 or equivalent. An elementary experimental study of habit formation, sensation, perception, memory, etc. Fall quarter. One credit.

*106. **Experiments in Educational Psychology.** Continuation of Psychology 105. Winter quarter. One credit.

*107. **Experiments in Educational Psychology.** Continuation of Psychology 106. Spring quarter. One credit.

110. **Psychology of Infancy and Early Childhood.** Prerequisite, Psychology 101, or equivalent. A study of the behavior of infants and small children. Spring quarter. Three credits.

*Fee \$1.50, to be paid at time of registration.

PHYSIOLOGY AND PUBLIC HEALTH

W. B. PRESTON, Professor; E. G. CARTER, Associate Professor; C. E. DANCY, Assistant Professor.

4. **Anatomy and Physiology.** A study of the structure and functions of the human body. Fall, Winter, or Spring quarter. Five credits.

Carter and Dancy

5. Laboratory Physiology. A course of laboratory exercises and demonstrations selected to illustrate the fundamental principles of physiology. Should accompany Anatomy and Physiology 4. Fall, Winter or Spring quarter. One credit.

Carter

***14. Health Education.** (May be used for Grammar Grade certification). This course deals with the adaptation of subject matter and methods to health education in the grades. Consideration will be given the various devices used at the present time in health teaching. The health of the teacher and the health habits of the pupils are emphasized. Two-year Normal students only may register in this course, unless special permission is obtained. Fall, Winter, or Spring quarter. Four credits.

Carter

***106 Applied Anatomy and Physiology of Exercise** Prerequisite, Anatomy and Physiology 4. Fall quarter. Five credits.

Carter

107. Physiology. An advanced course in special phases of physiology. Four lectures and one demonstration period per week. Prerequisites, Physiology 4, and General Chemistry or Physics. Winter quarter. Five credits.

Carter

108, 109. Public Health and Hygiene. (May be used for High School certification). This course deals with the physical and mental health of the individual, and his relationship to other members of the community. Some of the subjects considered are: Nature and prevention of diseases, food in its relationship to the well-being of the individual, heating and ventilation, occupational diseases, and especially the promotion of health through education. Prerequisite, Bacteriology, 1. Winter and Spring quarters. Three credits each quarter.

Preston and Carter

110. Physiology. Advanced physiology of the glands of internal secretion. Prerequisite, Physiology 4 or 107. Spring quarter. Two credits.

Carter

115, 116, 117. Journal Club. (Seminar). A study of current physiological literature including hygiene, with oral and written reports. Any quarter. One credit.

Carter

***Can not be counted in the Biological Science Group.**

170. Physical Diagnosis and Measurements. For men and women. This course aims to train the prospective physical director to detect the common physical defects. Instruction is given in methods of taking measurements and in strength tests. Prerequisite, Physiology 106. Spring quarter. Three credits.

Preston

ZOOLOGY AND ENTOMOLOGY

W. W. HENDERSON, H. J. PACK, Professors; VERDA DOWDLE, Instructor.

Students specializing in Zoology must take courses 3, 4, 13, 111, 112, 113, 108 or 116, 124, 125 and 126.

1. Elementary General Zoology. A study of morphology, physiology, differentiation, adaptation, and other zoological principles. A brief survey of the animal kingdom is undertaken to illustrate the application of the foregoing principles in the various groups. Special emphasis is placed on man's relation to the rest of the animal world. This course is intended for those who have not studied Zoology before, and who desire only a general view of the subject. It is recommended for all students except those in Agriculture and Arts and Science who desire a more comprehensive course. Four lectures and one lab. period. Fall, Winter, or Spring quarter. Five credits.

Henderson

3, 4. General Zoology. A systematic study of the animal kingdom, its general classification, and the relationship of the various groups of animals to each other. Emphasis is placed upon structural characteristics, development, functions, and relation of organs in the different groups. This course is well adapted for premedical students. Three lectures and two labs. Fall, and Winter quarters. Five credits each quarter.

Dowdle

13. General Entomology. A study of the structure, classification and life histories of insects. A course for students who desire a general knowledge of our common insects. Required of all students majoring in Zoology. Some field trips will be taken. Three lectures and one lab. Fall quarter. Four credits.

Dowdle

14. Agricultural Entomology. Life histories and control of the more injurious insects affecting agricultural crops, with special reference to those of the intermountain region. It is preferred that this course be preceded by Entomology 13. Three lectures and one lab. Winter quarter. Four credits.

Pack

102, 103, 104. Systematic Entomology. The structure of insects is studied sufficiently to enable the student to use keys employed in classification. Each student must collect, mount and properly identify a representative collection of insects found in the vicinity of Logan. Fall, Winter, and Spring quarters. Three laboratory periods. Three credits each quarter. Graduate credit may be allowed for this course.

Pack or Dowdle

105. Forest Entomology. A study of the major insects affecting forests and forest products. Prerequisite, Entomology 13. Three lectures and one lab. Winter quarter. Four credits.

Pack

106. Entomological Literature. Each student investigates and reports on the literature of some insect within his state. Historical development of entomology, current entomological literature and bibliographies are considered. Prerequisites, Entomology 13, 14, and 102. Graduate credit may be allowed for this course. Three lectures. Spring quarter. Three credits.

Dowdle

107. Entomological Technique. A study of methods of collecting, preserving and rearing insects, designed to fit students for specialized work in entomology. Graduate credit may be allowed for this course. Prerequisites, Entomology 13, 14 and 102. One lecture and one lab. Winter quarter. Two credits.

Dowdle

108. Insects in Relation to Man. Insects that annoy man, and that carry disease, as well as beneficial insects are considered. A course of important information. Lectures and assigned readings. Two lectures and one lab. Three credits.

(Not given 1929-30)

109. Insect Ecology. A study of the insect in its relationship to biological and physical factors. Three lectures. Fall quarter. Three credits.

Pack

111. Genetics. The biological principles of life and the inheritance of characters. A study of the germ cells with reference to heredity. The questions of variation, mutation, the inheritance of acquired characters, pure-lines, Mendelism, sex-determination and genetic principles generally are the main subjects of discussion. Prerequisite, Zoology 1 or 4. Five lectures. Fall or Winter quarter. Five credits.

Henderson

112. Eugenics. The principles of genetics as applied to the human race. Attention is given the historical development of and needs for eugenics, the inheritance of physical, mental and moral traits, human crosses, consanguineous marriages, eugenic procedure, and other principles which influence the innate qualities of human beings. Prerequisite, Zoology 111. Three lectures. Spring quarter. Three credits.

Henderson

113, 114. Comparative Anatomy. The structure of the vertebrate animal body. In the Winter quarter students will make a thorough dissection of a sexually mature dog-fish shark and in the Spring quarter of a sexually mature cat. Prerequisite, Zoology 1, 3, or 4. Zoology 113 is prerequisite to Zoology 114 and both are prerequisite to Zoology 115. Two lectures and two laboratory periods a week. Winter and Spring quarters. Four credits each quarter.

Henderson

115. Embryology of the Vertebrates. A general course in embryology. A comparative study of embryological development of Amphioxus, frog, chick, and man. Prerequisites, Zoology 113, 114. Spring quarter. Five credits. Hours to be arranged. Three lectures and two labs.

(Not given 1929-30)

116. Parasitology. The classification, morphology, and life history of human parasites. The disease producing protozoans, flukes, tape-worms, and round worms receive special study. Arthropods as external parasites and carriers of pathogenic organisms receive attention. This course should be taken by all premedical students. Three lectures and one lab. Spring quarter. Four credits.

Dowdle

121. Histology. A general course of Histology. Lectures and laboratory work in the principles of technic, practice in the preparation of slides, and study of epithelial tissue. Prerequisites, Zoology 3 and 4.

(Not given 1929-30)

124, 125, 126. **Seminar.** The students and the faculty of the department meet for one hour each week and hear reports from the members of the seminar on topics of mutual interest. Students specializing in Zoology must attend and participate in the activities of this seminar for at least three quarters. One credit each quarter. Time to be arranged.

The Staff

131. **Organic Evolution.** A critical study of the facts of evolution as obtained from a careful study of comparative anatomy, embryology, geographical distribution, blood tests and other fields upon which the doctrine of evolution is based. Factors causing evolution will be considered and discussions will be undertaken on other bodies of related thought. Prerequisite, some thorough course in biology. Three lectures. Fall quarter. Three credits.

Henderson

GRADUATE COURSES

201. **Zoological Research.** The student who wishes to engage in some line of original research and is qualified to do so may elect and study some topic from eugenics, ecology, morphology, or other branch of Zoology. Open to under-graduate students only by special arrangement with the department. Thesis required. Hours to be arranged.

Henderson

210. **Entomological Research.** Students may select or will be assigned certain problems dealing with different phases of entomology. The amount of credit will depend on the nature of the problem and the time spent. Thesis. Open to under-graduate students only by special permission. Prerequisites, Entomology 13, 14, and 102.

Pack

COMMERCE

AGRICULTURAL ECONOMICS AND MARKETING

(Administered jointly by the schools of Agriculture and Commerce)

W. P. THOMAS, P. E. PETERSON, Professors; W. U. FUHRIMAN, Assistant Professor.

Students in either the School of Agriculture or the School of Commerce may major in this department. Students specializing in the division of Agricultural Administration should register in the School of Agriculture. This will lead toward such occupations as the management of farms, teaching of farm management, employment as county agents, etc. Students wishing to specialize in the division of Agricultural Marketing should register in the School of Commerce. This will lead towards the business of marketing, management of cooperative enterprises, etc.

The foundation work in the first two years is similar, and should include studies in the different branches of the School of Agriculture, as well as in the School of Commerce. Liberality in the selection of these courses is permitted, depending upon the type of occupation which the student intends to follow after graduation; but it should include at least twelve credits from the School of Agriculture, and twelve from the School of Commerce before entrance to the Senior College. In the selection of these preliminary courses students should secure the approval of the Department of Agricultural Economics, and of the Department in the School of Agriculture or the School of Commerce offering the technical courses which he will later elect as minor.

51. Principles of Agricultural Economics. A general study of the principles of economics as they relate to agriculture. The production and distribution of agricultural products, together with government policies toward agriculture, and the relationship between agriculture and other industries, will be given special consideration. Spring quarter. Five credits.

Fuhriman

102. Farm Management. An analysis of the principles and problems of farm organization and management. A study of the problems of choosing, buying, organizing, and managing the various types of farms. Discussion of proper size, balance, diversity, and the relationship between the various enterprises. Prerequisite, Agricultural Economics 51. Fall quarter. Five credits.

Fuhriman

103. Farm Accounts. The practical application of accounting principles to farm management problems. Modifications to suit the different types of farming enterprises will be studied. Assembling and interpretation of accounting data. Lectures and assigned practice problems. Fall quarter. Four credits.

Peterson

104. Economic Development of Agriculture. A historical analysis of agriculture through the various stages of its development, with special reference to the United States.

(Not given 1929-30)

105. Agricultural Finance. A study of agricultural credit with regard to requirements, facilities, instruments, and methods of financing agriculture. This involves an analysis of our present financial organization and its relation to agriculture. Special attention will be given to the agencies authorized by the Federal Government to provide financial aid and credit to farmers and farmers' organizations. Prerequisite, General Economics. Winter quarter. Three credits.

Fuhrman

106. Land Economics. Principles underlying the utilization, valuation, tenure, and conservation of our land resources available for crops, pastures, and forests. Prerequisite, Agricultural Economics 51.

(Not given 1929-30)

112. Marketing Agricultural Products. The principles of marketing, types of marketing agencies, functions of middlemen, channels of distribution, consumers' demand, Governments' relation to marketing, and proposals for improvement. Prerequisites, General Economics 50, and Agricultural Economics 51. Fall quarter. Three credits.

Fuhrman

113. Cooperative Marketing. This course deals with the fundamental principles of cooperative marketing of agricultural products, the legal status of cooperation in the United States and a study of the growth and development of cooperative marketing.

The development, possibilities and limitations of cooperative marketing in Utah, together with the organization, financing, membership, marketing and production factors will be studied. The problems confronting cooperative marketing associations and the industry as a whole will be given special consideration. Winter quarter. Five credits.

Thomas and Fuhrman

114. Marketing Fruits and Vegetables. Trends in production, consumption, and marketing fruits and vegetables in United States as a whole and in Utah, together with special problems of over-production, local and foreign competition, quality of products, transportation factors; grading, inspection, and marketing methods will be given consideration. Spring quarter. Three credits.

Fuhriman

115. Production Economics. A study of the factors of production and their physical and economic combination, with the purpose of indicating how these factors must be combined in order to produce the greatest profit to the entrepreneur, and how changes in price relationships affect the combination of the elements of production. Winter quarter. Three credits.

Fuhriman

116. Marketing Livestock and Livestock Products. The production and marketing factors as they relate to the marketing of livestock and livestock products, with special reference to Utah's condition, will be given in this course.

(Not given 1929-30)

120. Agricultural Prices. Relationship between production and prices of agricultural products; trends in prices of agricultural commodities in Utah and competing states, in comparison with prices of non-agricultural products, and price cycles in their relation to Utah's agriculture. Prerequisites, Agricultural Economics 51 and 112. Winter quarter. Three credits.

Thomas

191. Advanced Farm Management. A detailed farm management analysis, including methods of making surveys, collecting, tabulating, organizing and analyzing data and a study of the application of results toward the improvement of the farm business. The student will be expected to do some actual field work and to analyze farm management data in the laboratory. Spring quarter. Five credits.

Fuhriman

210. Research in Agricultural Economics. Time and credit to be arranged.

Thomas and Fuhriman

211, 212, 213. Agricultural Economics and Farm Management Seminar. All seniors and graduate students majoring in this department are required to take part in these round table discussions of current problems

and recent publications in Agricultural Economics and Farm Management. Fall, Winter, and Spring quarters. One credit each quarter.

Thomas and Fuhrman

SUGGESTED COURSE OF STUDY FOR MAJORS IN AGRICULTURAL ECONOMICS

Freshman Year

Course	Hours
Economics 51 and 52.....	10
Freshman Composition 10-11-12	9
Mathematics 20 and 21.....	6
Chemistry.....	5
*Biological Science.....	6-8
*Agriculture.....	3-6
Typewriting.....	3
*Elective.....	3-4
Total.....	45-51

Sophomore Year

Course	Hours
Agricultural Economics 51.....	5
Economic History 30.....	3
Marketing 112.....	3
Language.....	5
*Biological Science.....	4-6
*Agriculture.....	9
Mechanical Drawing.....	3
Commercial Law.....	9
*Elective.....	4-8
Total.....	45-51

Junior Year

Course	Hours
Agricultural Finance 105.....	3
Commodity Marketing.....	3
Statistical Methods 131.....	5
Accounting 101.....	5
Taxation 155.....	5
Geography of Agriculture	5
Applied Sociology or Rural Sociology.....	3
Journalism.....	4
*Agriculture.....	9
*Elective.....	5-11
Total.....	45-51

Senior Year

Course	Hours
Farm Management 102 & 191 ..	10
Cooperative Marketing 113.....	5
Production Economics 115.....	3
Agricultural Prices 120.....	3
Business Forecasting 132 or Transportation Econ. 135..	5
Money and Credit 165.....	5
Research.....	5
Seminar.....	3
*Elective.....	6-12
Total.....	45-51

*The particular courses to be selected will depend upon the special interest of the student. He should consult with his major and minor professor in the selection of these courses.

BUSINESS ADMINISTRATION AND ACCOUNTING

P. E. PETERSON, W. L. WANLASS, Professors; R. M. RUTLEDGE, Associate Professor; V. D. GARDNER, Assistant Professor; THELMA FOGELBERG, Instructor.

ACCOUNTING

Accounting 101, 102, 103, may be used to satisfy in part the group requirements in Exact Science. No other courses in accounting may be so used.

Students may major in Accounting, Business Administration, Merchandising, Sales Management, or Secretarial Work.

Accounting 1, 2. **Introductory Accounting.** The purpose of this course is to present the basis principles of accounting and to furnish working materials in the form of questions, problems, and practice sets which require the application of the theory advanced. Principles learned here will be useful as a basis for further study of accounting and as an aid in the understanding and control of the more common problems of business. Technique will be strongly emphasized. Fall or Winter, and Spring quarters. Five credits each quarter.

Gardner and Fogelberg

101. **Fundamentals of Accounting.** A basic course in fundamental theory. Emphasis will be placed upon the construction and interpretation of accounts. Required of all students majoring in Business Administration and Accounting. Graduate credit may be allowed upon the completion of some additional work. Prerequisite, Mathematics 21, or 30. Fall quarter. Five credits.

Peterson

102. **Problems in Accounting Principles.** This course logically follows course 101 and brings to the classroom some of the vividness of the real problems as they arise in business. Selected cases and problems will be used. A critical understanding of accounting as it serves the executive is the aim of this course. Required of all majors in Business Administration and Accounting. Graduate credit may be allowed upon the completion of some additional work. Prerequisite, Accounting 101. Winter quarter. Five credits.

Peterson

103. **Accounting Practice and Procedure.** A careful study is made of some of the leading problems encountered in public and private practice. Three credits.

(Not given 1929-30)

Peterson

104. C. P. A. Problems. A selection of the problems used by the various State boards of accountancy and the American Institute of Accountants. Winter quarter. Five credits.

Gardner

107. Household Accounts. The practical application of accounting principles to home management problems. Students are expected to acquire a fair technique in handling of accounting records. Lectures and assigned practice problems. Spring quarter. Four credits.

Peterson

111, 112. Industrial Cost Accounting. A detailed study of the principles of cost accounting as applied to manufacturing industry, with particular stress upon methods of burden distribution and interpretation of cost statistics. Lectures with assigned problems and cases. Fall and Winter quarters. Three credits each quarter.

(Not given 1929-30)

Gardner

120, 121. Auditing. A study is made of the theory and practice of auditing. Rules of professional conduct, and the duties and responsibilities of auditors are emphasized. A considerable time will be devoted to the mechanics of auditing, the preparation of audit programs, working papers, and the final report. Open to graduate students. Prerequisites, Accounting 101, 102. Lectures, assigned cases and field work. Winter and Spring quarters. Five credits each quarter. Three lectures and two laboratory periods per week.

Peterson

122. Auditing Practice. The department is usually able to provide a limited amount of actual auditing practice. Only qualified students will be permitted to register for this work. Students must receive the approval of the instructor before registering. Fall quarter. Two credits.

Peterson

124, 125. Seminar. A reading and research course for graduates, seniors and specially approved juniors in accounting. Required of all accounting majors. Current developments in the field will be considered in lectures and reports. Fall and Spring quarters. One credit each quarter.

Peterson

BUSINESS ADMINISTRATION

25. Introductory Business Administration. An introductory course in the fundamentals of business administration. It is intended that this course shall furnish the student with a background for the study of the more complex problems of business. Not open for freshmen. Lectures and reports. Fall quarter. Five credits.

Gardner

128. **Business Finance.** This course treats of the structure of the corporate enterprise; providing capital for a new company; expansion of existing companies; recapitalization and reorganization of the corporation. Financial and operating ratios will be discussed. Proper financial plans and methods of marketing securities will also be considered. Prerequisites, Economics 51, 52, or equivalent. Fall quarter. Three credits.

(Not given 1929-30)

Gardner

130. **Problems in Investment.** With concrete cases used as a basis of discussion the varying investment needs of different classes of people will be studied in the first part of the course. In the second part, attention will be given to different types of investment houses; while in the third, types of investment securities will be analyzed.

(Not given 1929-30)

Gardner

131. **Corporation Finance.** This course is designed for students concentrating in accounting and finance. The financial plans and devices of various types and sizes will be studied, with a view of determining sound means of raising and conserving funds in different phases of the business cycle. Some attention will be given to financial policy in re-organization.

(Not given 1929-30)

Gardner

132. **Business Forecasting.** The uncertainty which now attends the outcome of business undertakings constitutes the principal defect of the modern business system. In recent years science has been applied to this field. There is now a great body of material which, if properly understood and used, would be of inestimable value in forecasting business conditions. The aim of this course will be to acquaint students with principles of business barometers. Prerequisites, Economics 51, 52 and 131, and Business Administration 25. Fall quarter.

(Not given 1929-30)

Wanlass

133, 134. **Industrial Management Problems.** Selected cases will be taken up for study and report. Problems in industrial location; on choice of site; on buildings and layout; on selection, purchase, and arrangement of equipment; on purchasing and stores; on organization; on industrial research; on labor relations; and on problems in managerial control. Prerequisite, Business Administration 25. Winter and Spring quarters. Five credits each quarter.

Gardner

136. **Business Ethics.** After a general survey of the science of ethics special consideration will be given to those principles of professional conduct which are rapidly being introduced into modern business. The work of trade associations and professional organizations will be critically analyzed. Spring quarter. Three credits.

(Not given 1929-30)

Wanlass

137. **Management Seminar.** A course for seniors and specially approved juniors in which current developments in the field will be considered in lectures and reports. Winter quarter. One credit.

Gardner

140. **Principles of Insurance.** A general course designed for the business man rather than solely for the specialist. Covers all major forms of property and personal insurance: fire, life, accident, automobile, title and liability policies, and fiduciary bonds. Fall quarter. Three credits.

Rutledge

141. **Principles of Real Estate.** A general course designed for the business man rather than solely for the specialist. The technic of real estate appraisal, transfer, legal restrictions, and the forms and papers used in real estate transactions. Winter quarter. Three credits.

Rutledge

149. **Business Policy.** This is a co-ordinating course aimed to develop perspective and judgment. Problems will be discussed in finance, control, legal and ethical aspects. Required of all majors in business administration. Spring quarter. Five credits.

Gardner

MERCHANDISING

51. **Principles of Selling.** Designed to meet the needs of students who want a general knowledge of the principles (psychological and economic) underlying retail, wholesale, and specialty selling. Spring quarter. Three credits.

Rutledge

52. **Sales Administration.** The salesman in marketing strategy. Recruiting, selection, development, and equipment of salesmen. Direction of sales campaigns. Stimulating sales activities. Spring quarter. Three credits.

Rutledge

151, 152. **Problems in Merchandising.** The aim of this course is to present by means of carefully selected cases the manager's merchandise problems. Methods of marketing merchandise; selection of channels of distribution for consumers and industrial goods; sales organization and control; advertising and sales promotion; stock-turn; price policies. Winter, and Spring quarters. Five credits each quarter.

Peterson

154, 155. **Principles of Advertising.** Designed to meet the needs of students who want a general appreciation of advertising as a tool in business. Attention will be given to the "advertisability" of products, the relationship of advertising to given plans of distribution and production, and to finance. The work will include choice of appeals for various classes of goods, choice of media, and the mechanics of good advertising. Principles will be applied to the analysis of magazine and newspaper advertising, and to the preparation of some advertisements. Fall and Winter quarters. Five credits each quarter.

(Not given 1929-30)

Gardner

161, 162. **Retail Store Management Problems.** The aim of this course is to present, by means of carefully selected and co-ordinate cases, the management problems of retail stores. The problems studied include accounting, statistics, organization, merchandise, selling, stock, buying, personnel, finance, price policies, and general administrative policies. The case method. Winter and Spring quarters. Five credits each quarter.

(Not given 1929-30)

Peterson

SECRETARIAL WORK

30. **Business English.** This course aims to give the student practice in the writing of different kinds of business letters and reports. Special attention will be given to report writing. Fall quarter. Three credits.

Fogelberg

75, 76, 77. **Elementary Stenography.** Thorough drill in the fundamentals of the Gregg system of shorthand. Fall, Winter, and Spring quarters. Three credits each quarter.

Fogelberg

78, 79, 80. **Advanced Stenography.** Thorough review of the principles of the Gregg system of shorthand. Special attention will be paid to the acquirement of speed. Prerequisites, One year stenography and typewriting. Fall, Winter, and Spring quarters. Three credits each quarter.

Fogelberg

86, 87, 88. **Beginning Course in Typewriting.** Parts of the typewriter and how to use them; mastery of the keyboard, emphasizing position, rhythm, technique, and accuracy. Fall, Winter and Spring quarters. One credit each quarter.

A fee of \$1.00 per quarter will be charged.

Fogelberg

89, 90, 91. **Second Year Course in Typewriting.** Letter writing, tabulation, and legal documents. Accuracy and speed emphasized. One credit each quarter. Fall, Winter, and Spring quarters.

A fee of \$1.00 per quarter will be charged.

Fogelberg

92, 93, 94. **Advanced Course in Typewriting.** Advanced work in letter writing and tabulation work. Special attention given to form and arrangement. Speed emphasized. Actual practice furnished. Fall, Winter, and Spring quarters. One credit each quarter.

A fee of \$1.00 per quarter will be charged.

Fogelberg

95. **Calculator Operation.** Instruction and practice in the use of the Burroughs calculating machines. Fall or Spring quarters. One credit.

A fee of \$1.00 will be charged.

Fogelberg

96. **Burroughs Posting Machine.** A laboratory course giving instructions in the use of the Burroughs Posting Machine. Registration limited to six students. Three hours per week. Fall or Spring quarters. One credit.

A fee of \$1.00 will be charged.

Fogelberg

175, 176. **Secretarial Science.** This course is intended as a finishing course for students who intend to major in secretarial work. Attention will be given to filing and indexing, handling mail, modern methods, duties of the stenographic and allied departments, and secretarial ethics. Prerequisites, two years of typewriting, two years of stenography, Accounting 1 and 2, or equivalent, and General Economics. Winter and Spring quarters. Three credits each quarter.

Fogelberg

ECONOMICS AND SOCIOLOGY

W. L. WANLASS, F. D. DAINES, JOS. A. GEDDES, WILLIAM PETERSON, Professors; R. M. RUTLEDGE, Associate Professor; V. D. GARDNER, REED BAILEY, Assistant Professors; CAROLINE M. HENDRICKS, Instructor.

4. Economic Resources. An analysis of resources and industries, with particular emphasis upon their regional distribution in the United States. Relations of social and physical conditions. The historical background. Climate, minerals, agricultural products, transportation facilities, etc. Special attention paid to those forces bringing about changes in our economic structure. Fall, Winter, or Spring quarter. Three credits.

Rutledge

10. The Natural Economic Resources of Utah. Includes a study of land and water relationships, water power, timber, and metal and mineral deposits, as they have influenced the industry of the area. Special study will be given to the geographic distribution and economic importance of deposits containing gold, silver, iron, copper, zinc, manganese, clay, gypsum, coal, sulphur, cement, lime, gilsonite, elaterite, oil shale, oil salt, alunite, phosphate, sulphate, etc. The various manufacturing processes involved in turning Utah's natural resources into finished products will be studied. Attention will be given to the size, character, and location of the deposits as they affect manufacturing processes, as well as the markets for the products and the competition with other supplies. Winter quarter. Five credits.

William Peterson

12. Principles of Human Geography, and Geography of Utah. This course is planned to set forth the great principles of geography, and the effects geography has had and is having on man and his endeavors. Physiography, a study of the earth's features, such as mountains, lakes, rivers, swamps, coastlines, etc.; climate, with its rainfall and temperatures, winds and general air circulation; minerals, soils, plant and animal life, and their effects on man's economic, social, political, and cultural development. Attention given particularly to Utah conditions. Fall quarter. Five credits.

Bailey

30. Economic Development of the United States. This course indicates the dominance of economic forces in history. A critical study of the evolution and progress of American agriculture, industry, commerce, transportation, banking, labor organizations, etc., from the Colonial period to the present time, ending with a survey of existing institutions. Sec. 1—Fall. Sec. 2—Winter. Three credits.

Rutledge

51, 52. **General Economics.** After a brief survey of man's economic development, a careful study is made of those fundamental laws and principles that govern our modern economic life. Some attention is also given to present economic problems preparatory to a more intensive study in the advanced courses in this department. 51 is given either Fall or Winter quarters; 52 is given either Winter or Spring quarters. Five credits each quarter.

Staff

110. **Commerce and Commercial Policies.** Attention given to the fundamentals of trade and commerce, to the methods of increasing, limiting and directing American trade, and an analysis of sound commercial policies. Prerequisites, Economics 51, 52. Three credits.

(Not given 1929-30)

115. **Economic Resources of the World.** Economic, social, industrial, mineral, and agricultural resources in relation to commerce; climate, population, etc., in their world relationships. Typical industries will be followed, from the production of their raw materials to the marketing of their finished products. Spring quarter. Five Credits.

Rutledge

117. **Economic Resources of Europe.** Same scope as 115, except that the situation in Europe will be intensively studied, with especial reference to relations of Europe and America. Fall quarter. Five credits.

Wanlass

125. **Labor Problems.** A study of the labor situation from the social point of view. Special attention is given to labor problems and to methods of securing industrial peace. Prerequisites, Economics 51, 52. Spring quarter. Three credits.

Geddes

131. **Statistical Methods.** This course deals with statistical methods rather than the mathematics of statistics. Special attention will be given to those forms and methods of procedure that are used in the social sciences and agriculture. Actual statistical studies will be made by each student. Prerequisites, Math. 22 or 25. Economics 51, 52. Fall quarter. Five credits.

Gardner

135. **Transportation Economics.** Emphasis is placed chiefly on railroad transportation in the United States. Some attention will be given to highway transportation. The underlying economic principles will receive

more attention than the practical phases of transportation. Special attention will be given to those problems that are peculiar to the intermountain section. Prerequisites, Economics 51, 52. Five credits.

(Not given 1929-30)

Wanlass

155. Principles of Taxation. After a brief survey of the fundamental economic principles of public finance, a critical examination of our federal, state and local taxes and the various business taxes will be studied. Special attention will be given to tax problems in Utah. Prerequisites, Economics 51, 52. Winter quarter. Five credits.

Wanlass

165. Money and Credit. The nature, development and uses of money and credit. Special attention given to bimetalism, the gold standard, the money market and the relation of money and credit prices. Prerequisites, Economics 51, 52. Fall quarter. Five credits.

Wanlass

167. Banking. The functions and operation of such financial institutions as commercial banks, saving banks, and trust companies will be studied critically. This will be followed by an historical treatment of banking in the United States and a survey of European and Canadian Banking in comparison with our Federal Reserve System. Varied reading and reports on pertinent problems will characterize the course. Prerequisites, Economics 51, 52. Winter quarter. Five credits.

Wanlass

168. Money Markets. A study of the factors affecting the international flow of funds and the relationships of banking institutions thereto. Foreign exchange. Governmental policies affecting inflation and deflation of money. International debts. Spring quarter. Five credits.

Wanlass

180, 181, 182. Current Economic Problems. (Economics Seminar.) A reading and research course designed for junior, senior, and graduate students who are majoring in economics and related subjects. Special reports on current economic problems and literature will be made. Required of students graduating in economics. Fall, Winter, and Spring quarters. One credit each quarter. Two years credit allowed.

Wanlass and Rutledge

195. History of Economic Doctrines. A critical study of the origin and development of the economic theories of the leading thinkers in the leading nations of the world. Spring quarter. Three credits.

Wanlass

GRADUATE COURSES

200. **Research in Economics.** Special investigations in problems of economics may be carried on by senior and graduate students. Credit will be granted according to work done.

Wanlass and Rutledge

206. **Advanced Economic Theory.** A critical analysis of present day economic theories and doctrines. The purpose of the course is to enable students to get a better grounding in economics and to correlate the work of the various courses in economics. Only senior and graduate students who have had considerable work in economics will be admitted. Spring quarter. Two credits.

Wanlass

SOCIOLOGY

Sociology 5 and 70 are prerequisite for all upper division courses in Sociology, except Educational Sociology (100) and Rural Sociology (101). For these latter subjects Sociology 5 is prerequisite.

(Effective for students entering college—1928-29.)

5. **Social Relations.** Given in conjunction with Political Science 4 and Economics 4 as an orientation course for freshmen. The principal purpose is to obtain a concrete view of society in everyday interaction. Person-to-person relationships are stressed. Fall, Winter, or Spring quarter. Three credits.

Mrs. Hendricks

40. **Social Hygiene.** A study of courtship and marriage, of the home and family; their biological background, including the urges and the psychology of their direction towards moral, Christian, social relationships as reflected in the conventions of society and in the persistence of group pressure in their enforcement. Fall, Winter, or Spring quarter. Two sections each quarter. Two credits.

Mrs. Hendricks, Richards

61. **Women and Culture.** Open to women students only. A study is made of women's contribution to culture. Traditional forms of individual refinement are observed, with the purpose of becoming familiar with inherently harmonious, balanced-types of personality. The richly varied, yet unified, life is emphasized. Spring quarter. Two credits.

Mrs. Hendricks

70. Principles of Sociology. The foundations of sociology are studied in order that a plan of social progress may be formulated. The problems of social origins, social structures, public opinion, social activities, social organization, and societal evolution are carefully considered. Prerequisite, Sociology 5. Fall or Winter quarters. Five credits.

Mrs. Hendricks

100. Applied Educational Sociology. By utilizing a series of practical problems it is aimed to prepare the public school teacher for meeting the problems of school and community. Fall quarter. Three credits.

Geddes

101. Applied Rural Sociology. A study is made of the problems of rural life as a basis for constructive action in developing, and maintaining an efficient and wholesome civilization in the country. Winter quarter. Three credits.

Geddes

140. Social Psychology. The influence of the "groups" in the formation of the "norms" of life and in exerting pressure on the personality is stressed. Fall quarter. Three credits.

Geddes

141. Urban Sociology. This course deals with city life. The ecological distribution of the population, the relation between groups, the problems of class conflict, the forms of social control, the improvements in impersonal relationships are basic considerations.

(Not given 1929-30)

Geddes

161. Modern Social Problems. A selection of a series of social problems is made. These problems are studied with the two-fold object of ascertaining the present situation and of arriving at common-sense solutions. Spring quarter. Three credits.

Geddes

170. Juvenile Delinquency. A study of juvenile offenders. The causes of delinquency are considered with the purpose of arriving at intelligent remedies. Various methods of home, social, and institutional treatment are studied: parental cooperation, personal supervision allied with probation and parole, institutional treatment, etc. Spring quarter. Three credits.

Mrs. Hendricks

171. Social Problems of the Family. In this course the relations of the family with outside groups, agencies, and institutions are stressed. Attention is also paid to the inter-relation between the different members of the family. Home life is treated as a changing, developing, basic organization which should be in constant reciprocal relation with outside agencies. Fall quarter. Three credits.

Mrs. Hendricks

172. Poverty and Dependency. A study is made of the extent of poverty, its causes, remedies now in use and others which give promise. Social methods of caring for dependents are examined. Emphasis is placed on programs which look to prevention and to minimization as well as to adequate care. Spring quarter. Three credits.

(Not given 1929-30)

Mrs. Hendricks

185. Community Organization and Leadership. A course dealing with the efforts of communities to organize the various fields which have to do with the chief interests of life. The coordination of agencies, the opportunities for leadership, the effects of disorganization are studied. Spring quarter. Three credits.

(Not given 1929-30)

Geddes

190, 191, 192. Seminar in Sociology. Fall, Winter, and Spring quarters. One credit each quarter.

Department

GRADUATE COURSES

201. Research in Sociology. For advanced students only. A project is organized and field work is carried on under supervision. Original studies are made. Prerequisites, Sociology 5, 70, Math. 22. Credit and hours to be arranged.

Geddes

202, 203. The Study of Society. An advanced course in Sociological theory. Sociology is studied both as a classified body of facts and as a method of investigation. Prerequisites, Sociology 5, 70. Fall quarter. Five credits.

(Not given 1929-30)

Geddes

204. Methods in Social Research. Study of present methods of carrying on social research. Exploration, the interview, the survey, the diary, the letter, the life history, interpretation of data are stressed. Prerequisites, Sociology 5, 70, Math. 22. Winter quarter. Two credits.

Geddes

POLITICAL SCIENCE

F. D. DAINES, ASA BULLEN, Professors.

4. **Citizenship.** The aim of this course is to make a study of the social environment, from the point of view of discovering the points of contact between the individual and the problems of human relationship. Fall, Winter, or Spring quarter. Three credits.

Daines

5. **State Government.** The relationship of the States and the Nation in our federal form of government. The government of Utah will receive special attention. Three credits.

(Not given 1929-30)

11, 12, 13. **Commercial Law.** The law of contracts, agency, negotiable papers, banks and banking, guaranty and suretyship. A comprehensive study of the principles of law underlying each of the above subjects. Open to all students of Sophomore standing or above. Fall, Winter, and Spring quarters. Three credits each quarter.

Bullen

103. **International Relations.** Psychological, economic, racial and other obstacles to international cooperation, as exemplified in recent events. The Treaty of Versailles; the League of Nations; the present day world politics. Prerequisite, one year of Social Science. Fall quarter. Five credits.

Daines

104, 105. **Commercial Law.** The law of bailments, sales of personal property, partnerships, corporations and bankruptcy. Prerequisites, Political Science 11, 12, 13. Fall and Winter quarters. Three credits each quarter.

Bullen

106, 107, 108. **Commercial Law.** The law of property, real and personal, including deeds, conveyancing and abstracts of title, mortgages, wills and estates. The law of insurance and debtor and creditor. Prerequisites, Political Science 11, 12, 13. Fall, Winter, and Spring quarters. Three credits each quarter.

(Not given 1929-30)

109. **The Law in Business Problems.** A study of the legal aspects of business. Prerequisites, Political Science 11, 12, 13, and Political Science 104, 105, or 106, 107, 108. Spring quarter. Three credits.

Bullen

112. State Administration. The organization and activities of state agencies of administration. A comparison of administrative organization of Utah with that of other states in the Union. Three credits.

(Not given 1929-30)

113, 114. Municipal Government and Administration. The government and problems of cities, with special reference to American experience. Organization, personnel, and practices which have developed in the performance of the various business functions of the city government. Prerequisite, one year of Social Science. Three credits each quarter.

(Not given 1929-30)

116. Theory of State. The nature of the State, its organization and activities, and its relation to individuals and to other states. Prerequisites, one year of Social Science. Three credits.

(Not given 1929-30)

117. American Political Ideas. Fundamental theories underlying American Political institutions and governmental policies. Prerequisite, one year of Social Science. Fall quarter. Five credits.

Daines

118. Political Parties. Their function in government; their organization and methods. Prerequisite: one year of Social Science. Three credits.

(Not given 1929-30)

124, 125. Public Opinion. The aim of the course is to investigate the psychological and other factors involved in the determination of opinion on public questions. The reliability of sources of information and the subjective influences that must be taken into consideration are discussed. The use of various methods of spreading propaganda is considered. Prerequisite, one year of Social Science. Winter and Spring quarters. Three credits each quarter.

Daines

127, 128. Constitutional Law. The Constitution of the United States, especially as determined by judicial interpretation. Three credits each quarter.

(Not given 1929-30)

150, 151, 152. Current Political Problems. (Political Science Seminar). A course designed for junior, senior, and graduate students majoring in political science and related subjects. Required of those graduating in Political Science. Fall, Winter, and Spring quarters. One credit each quarter.

Daines

ENGINEERING

RAY B. WEST, O. W. ISRAELSEN, A. H. SAXER, Professors; AARON NEWHEY, A. H. POWELL, *E. B. FELDMAN, GEORGE D. CLYDE, L. R. HUMPHERYS, Associate Professors; A. J. HANSEN, S. R. EGBERT, D. A. SWENSON, SIDNEY STOCK, Assistant Professors; V. H. TINGEY, Instructor.

MILITARY SCIENCE AND TACTICS

Martin J. O'Brien, Major, C. A. C., Professor; Herbert B. Kraft, First Lieutenant, C. A. C., John L. Hanley, First Lieutenant, C. A. C., Assistant Professors; Eugene J. Callahan, First Sergeant, D. E. M. L., Instructor.

CIVIL ENGINEERING

APPLIED MECHANICS AND DESIGN

CE 1. **Materials of Engineering and Shop Practice.** The chemistry of steel, the alloys, etc., and their special use in machine parts; strengths composition and proper use of wood, plaster, glass, glue, paint, brick, etc. Cement, sand and gravel. Mechanical analysis curves, water-cement, ratio, cement and concrete testing. Fall, Winter, and Spring quarters. Two credit, each quarter. Hours to be arranged.

The Staff

CE 101, 102. **Engineering Mechanics.** Statics and kinetics, resultant of forces, equilibrium of force systems, friction; moments and moments of inertia; force, mass, and acceleration; work and energy; impulse and momentum. Fall and Winter quarters. Five credits each quarter. (See also Physics 150, 151).

Saxer

CE 103. **Applied Mechanics and Strength of Materials.** The simple machines, reactions, moments, and shears; the design of beams and columns. Spring quarter. Five credits. (See also Physics 152).

Clyde

(Courses numbered below 100 designate Junior College courses. Courses numbered from 100 to 199 are Senior College, and those numbered above are Graduate Courses.)

CE 106. **Reinforced Concrete.** The fundamental principles of reinforced concrete design. Slabs, beams, girders, and columns. Winter quarter. Five credits.

*On leave of absence.

Clyde

CE 107. Masonry Construction. A continuation of course 106, with special application of foundations, bridges, retaining walls, drains, and irrigation structures. Spring quarter. Three credits.

Feldman

CE 110. Graphic Statics. The graphic analysis of stresses in framed structures. Fall quarter. Three credits.

CE 111, 112. Bridge Analysis. The algebraic and graphical analysis of stress in the modern types of bridge trusses. Special attention is given to influence lines and equivalent uniform loads. Winter and Spring quarters. Three credits.

Feldman

CE 113, 114, 115. Bridge Design. The design of the modern types of bridges and culverts in wood, steel and concrete. Prerequisite: CE 103 and CE 112. Fall, Winter, and Spring quarters. Three credits each quarter.

Feldman

CE 201. Indeterminate Structures. The elastic theory; method of least work; moment area method, and method of elastic weights. Three credits.

Feldman

CE 202. Indeterminate Structures. The application of CE 201 to the solution of problems in steel and concrete. Box culverts, continuous span concrete slab bridges, swing bridges, and other problems. Three credits.

Feldman

HIGHWAYS

CE 21. Highway Construction. Location, grade, drainage, resistance to traction, road materials, construction methods and costs. Fall quarter. Three credits.

West

CE 22. Inspection of Highway Construction. A study of the road inspector's duties on all types of roads, pavements, and bridges. Winter quarter. Three credits.

West

CE 121. **Highway Administration and Design.** State, County, and City highway departments, highway and local improvement laws, traffic regulations, taxation, and methods of financing country roads and city pavements. Economic design and reconstruction. Winter quarter. Three credits.

West

CE 125. **Transportation.** Development of highway transportation. Comparison of methods of transport of passengers and commodities by highway, railway, and waterway. Organized and operated Rural Motor express lines, freight lines, and bus lines, etc. Spring quarter. Three credits.

West

CE 122, 123, 124. **Seminar.** One credit each quarter. Fall, Winter, and Spring quarters.

West

IRRIGATION AND DRAINAGE

CE 141, 142. **Hydraulics.** Laws of liquids in motion and at rest; flow in natural and artificial channels and elementary principles of water power development. Fall and Winter quarters. Three credits.

Clyde

CE 143. **Hydrology.** The occurrence, utilization and control of water. Rainfall, stream flow and runoff, measurements and records, reservoirs, and pumping for irrigation. Spring quarter. Three credits.

Clyde

CE 144. **Management and Operation of Irrigation Systems.** Delivery of water to irrigators, annual water charges, operation costs. Prerequisites, Design of Irrigation Systems, CE 146, 147. Winter quarter. Three credits.

Clyde

CE 145. **Designs of Drainage Systems.** Preliminary survey, location of drains, flows in open channels, and construction of drainage systems, with special reference to drainage of irrigated lands. Prerequisites, CE 141 and 142. Spring quarter. Five credits.

Israelsen

CE 146, 147. **Design of Irrigation Systems.** Sources of water supply, diversion works, canal alignment and cross section, flumes, drops, and spillways. Prerequisites, CE 141 and 142, and CE 101, 102. Fall and Winter quarters. Five credits each quarter.

Israelsen

CE 148. **Hydroelectric Design.** Principles of design of hydraulic machinery used in the generation of power. Dams, penstocks, surge tanks, pipe lines, and plant layouts. Spring quarter. Five credits.

Israelsen

CE 149, 150. **Irrigation Institutions.** Water right doctrines, laws governing the adjudication and acquirement of water rights, and the distribution of water; organization of irrigation enterprises. Prerequisite or parallel, a general course in Economics or Sociology. Winter and Spring quarters. Three credits each quarter.

Clyde

CE 241, 242, 243. **Research in Irrigation and Drainage.** Specially prepared undergraduates or graduate students may elect a problem in irrigation or drainage for investigation, subject to the approval of the professor in charge. Such investigations may be conducted at the college or elsewhere. The studies may be used as a basis for a thesis, to meet in part the requirements for an advanced degree. Students may register at the beginning of any quarter. Credits and hours to be arranged.

Israelsen or Clyde

MECHANICAL DRAWING

Drawing rooms are open from 8:00 am. to 5:00 p. m., daily. Supervised instruction given from 2:00 to 5:00 p. m. A student may register for any number of credits. Three hours per week are required for one credit. All classes conducted simultaneously in Room 307, Engineering Building. All drawing courses are offered each quarter.

All courses in Drawing to be given by Dean West and Mr. Tingey.

CE 61. **Engineering Drawing.** The use and care of instruments, applied geometry and orthographic projection. Four credits.

CE 62. **Engineering Drawing.** Pictorial presentation, isometric, oblique and cabinet projections. Developing surfaces and intersections. Four credits.

CE 63. **Descriptive Geometry.** The point, line, plane and simple solids are studied. Four credits.

CE 68. **Machine Drafting.** Drawing of fastening machine parts, etc., such as bolts, screws. Four credits.

CE 71. **Map and Topographical Drawing.** Surveys, symbols, topographical maps, etc. Three credits.

CE 72. Industrial Drawing Lettering. The use and care of instruments and the elements of orthographic projection. The graphical presentation of business data, plant layout, routing, flow sheets, etc. Inspection trips will be made to typical industries. Winter quarter. Three credits.

CE 75. Architectural Drawing. Building details including the complete working drawings for a small farm house, plans, elevations, and specifications. Four credits.

SURVEYING

CE 81. Plane Surveying. Use of tape, transit, level, compass, etc., in field problems and traverses. Differential and profile leveling, plotting, mapping, and care of instruments used by engineers. Fall quarter. Three credits. Lecture hours to be arranged.

West and Tingey

CE 82. Plane Surveying. Topographical surveying, hydrographic surveying and some rural and city surveying. Prerequisite, Trigonometry. Spring quarter. Three credits. Lecture hour to be arranged.

West and Tingey

CE 83. Mapping. Practice in the mapping of the various kinds of surveys that may be encountered by the engineer. Winter quarter. Three credits.

West

CE 181. Advanced Surveying. Instructions and practice in the application of surveying methods used in the layout and construction of canals, roads, railroads, and other engineering works. Prerequisite, CE 81 and 82. Spring quarter. Five credits.

West

GENERAL

CE 190. Contracts and Specifications. The form and essential consideration in drawing up engineering contracts and specifications. Fall quarter. Three credits.

West

CE 191. Railroads. Economics of Railroad location, and Railroad construction. Spring quarter. Three credits.

West

CE 192. **Water Supply.** Surface and underground waters, storage, waterworks, pipe lines, pumping, etc. Fall quarter. Three credits.

CE 193. **Sewage Purification and Disposal.** Spring quarter. Three credits.

West or Clyde

CE 194. **Sewerage Systems.** Flows in sewers. Design and construction of sewerage works. Fall quarter. Three credits.

West or Clyde

CE 196. **Heat and Power Machinery.** Steam generation; fuels and combustion; construction and operation of boilers; elementary thermodynamics. Types, details and tests of steam engines and gas engines. Measurement of power. Fall quarter. Four credits. See also Physics 118.

F.L. West

CE 197. **Electric Machinery.** Principles of continuous and alternating current, generators and motors; transmission and distribution; air compressors. Spring quarter. Three credits. See also Physics 112.

(Not given 1929-30)

F.L. West

CE 198, 199. **Undergraduate Thesis.** Senior year, one credit each quarter. Fall and Winter quarters. Hours to be arranged.

AGRICULTURAL ENGINEERING

AE 1, 2. **Agricultural Surveying.** For students of Forestry and Agriculture. Practice in the handling of surveying instruments, leveling, and traversing. The surveying of forest roads. Public Land surveys and the retracing of section lines. Fall and Spring quarters. Three credits each quarter.

West and Tingey

AE 3. **Agricultural Drawing.** The use and care of instruments and orthographic projection. Farm structures. Two credits.

(Not given 1929-30)

AE 4. **Agricultural Mapping.** Maps and topographical drawing of farm problems. Two credits.

(Not given 1929-30)

AE 6. **Farm Structures.** The arrangement, design and construction of barns, stables, poultry houses, silos and other farm structures. Winter quarter. Three credits.

Humpherys

AE 7. Poultry House Design. The plans and layout of the various types of structures used in Poultry Husbandry, complete layout of poultry ranch. Winter or Spring quarters. Three credits.

(Not given 1929-30)

Humpherys

AE 8. Barn and Stable Design. Various types of barns and stables, layouts and construction. Winter or Spring quarters. Three credits.

(Not given 1929-30)

Humpherys

AE 9. Concrete Construction for Agricultural Purposes. Various mixtures of cement and their uses; the use of concrete in making barns, water troughs, posts, etc. Spring quarter. Three credits. Hours to be arranged.

West

AE 10. Planning of Farm Structures and Homes. The making of plans for farm buildings, including complete specifications, costs of materials and construction. Winter quarter. Hours to be arranged.

West

AE 11. House Building and Contracting. Various methods of construction, the frame, two brick, three brick, stucco, single cement, block and stuccoed hollow tile; cost and economy of each; interior finishing. Winter quarter. Five credits.

West

AE 12. Irrigation and Drainage Practice. Water measurements, effect of soil and plants on time and frequency of irrigation, duty of water, design of farm ditches and preparation for farm drainage. These courses may be used as a major or minor in the Department of Agronomy. Summer quarter designed especially for high school instructors. Spring quarter. Three credits.

Israelsen

AE 201. Research in Irrigation and Drainage. Specially prepared undergraduate, or graduate students in civil or agricultural engineering may elect a problem in irrigation or drainage for investigation, subject to the approval of the professor in charge. Such investigations may be conducted at the college or elsewhere. The studies may be used as a basis for a thesis to meet in part the requirements for an advanced degree. Any quarter. Credits and hours to be arranged.

Israelsen or Clyde

AE 13. Farm Motors. This course will cover the care, adjustment and lubrication of the automobile, tractor, the stationary gas engine, and the home lighting and water systems, the care of this equipment when not in use, and precautions to be taken when preparing it for operation. It will also include bearings and bearing adjustment, babbiting and fitting of babbit bearings, soldering and fundamental principles of power transmission by the use of belting and pulleys, care of belts and speed calculations. Fall quarter. Three credits.

Powell

AE 14. Farm Shop Repair Work. (See Wood Work Unit C). This course is especially arranged for agricultural students. The application of forging operations to repairs on the farm. The repairing of the following farm implements will be included in the course: the plow, wagon, harrow, hay rake, mowing machine, binder, header, etc.; making and tempering punches and cold chisel; sharpening and tempering harrow teeth, picks, etc. Fall and Spring quarters. Two credits.

Egbert

AE 15. Farm Machinery. A complete assembling, adjusting, care and repair of the various types of farm implements and farm machinery. Spring quarter. Three credits.

Powell

AE 16. Gasoline Tractor Operation and Repairing. The overhauling of the tractor including babbiting of bearings, fitting of new parts and operation of tractor. Fall quarter. Repeating Spring quarter. Four credits.

Powell

AE 102. Tractor Repair and Operation. An advanced course for men wishing to specialize in tractor service work. It includes field work, operating problems, trouble shooting and repairs. Fall quarter. Four credits.

(Not given 1929-30)

Powell

MECHANIC ARTS

Auto Mechanics

MA 1. Automobile Design and Construction. A course for beginners. This course is a thorough study of the design and construction and function of the various units and parts of the automobile, with special reference to gas engine principles and the mechanism involved. This course or its equivalent must be taken by all students who wish to specialize in any branch of automobile work. Fall quarter. Four credits.

Powell

MA 2. Automotive Design and Construction. A continuation of Auto Mechanics 1. It also deals with the dismounting and the assembling of the automobile. Winter quarter. Four credits.

Powell

MA 3. Automobile Care and Maintenance (Special). For winter students only. This course is designed especially for winter course or short term students who wish to learn enough about the care and operation of the automobile, to enable them to make their own minor repairs and adjustments. Oils, lubrication, valve grinding, bearing cutting, fitting of piston rings, etc., will be taken up, along with many other problems that the average owner has to be familiar with if he is going to do his own repairing and care for his car properly. Winter quarter. Four credits.

Powell

NOTE: Mechanic Arts 4, 101, and 102, are advanced courses. They must be taken by all students who intend to specialize in garage management, garage practice, teaching, or repairing. The course will cover the detailed theory, operation, advantages in design and construction of all modern makes of cars, and automobile equipment and appliances. Methods of systematic location of trouble, dismantling, repairing, and assembling. Modern shop methods, tools and equipment. Prerequisites, Mechanical Arts 1 and 2, or their equivalent.

MA 4. Automobile Repair. Spring quarter. Four credits.

Powell

MA 5. Automobile Care, Adjustment and Lubrication. For automobile owners and others desiring a course that will enable them to do their own service work on automobiles, to enable them to operate the car in the most efficient way and to reduce to a minimum the cost of operation. It will include all phases of lubrication, carburization, brake adjustment, tappet adjustment and correct general principles of operation. Fall, Winter and Spring quarters. Two credits each quarter.

Powell

MA 101. Automobile Repair. Prerequisite, Auto Mechanics 4. Winter quarter. Four credits.

Powell

MA 102. Automobile Repair. A continuation of MA 101. Includes shop methods and equipment. Prerequisite, MA 101. Spring quarter. Four credits.

Powell

MA 103. Gasoline Engine Carburation and Carburetor. Internal combustion, engine fuels, and a thorough treatise on the principles of carburetion, the construction of carburetors and their relation to successful gas engine operation. Practice in repairing, overhauling and adjusting of carburetors, thorough study of the modern devices and improvements on new models will be taken up. Prerequisites, MA 4 and MA 111. Fall quarter. Three credits.

Stock

IGNITION, STARTING, LIGHTING AND RADIO

All courses taught by Sidney Stock, Assistant Professor

MA 11. Elements of Electricity and Magnetism. A complete study of magnets, magnetism, and the elementary principles of electricity. It includes a study of the units of electricity, their governing laws, power measurements, induction, electro magnets, sizes of wires and their carrying capacity, dry cells and their application to the automotive electrical industry. Required of all students specializing in Ignition, Starting, and Lighting. Fall quarter. Four credits.

MA 12. Ignition, Starting and Lighting (Special). For winter quarter students only. This course is designed especially for short term students who wish to learn enough about the electrical apparatus of the automobile to enable them to care for and locate electrical troubles and make minor repairs. It will include a study of spark plugs, high and low tension coils, ignition timing, high and low tension magnetos, battery ignition systems, care and testing of batteries and adjusting the charging rate or generators. Winter quarter. Four credits.

MA 13. Storage Batteries. The aim of this course is to furnish students the experience necessary to enable them to care for and handle a battery service station and repair shop. A thorough study of the different types and makes of batteries will be made. Practice will be given in testing, charging, discharging, disassembling and rebuilding and in the diagnosis of battery trouble. Prerequisite, MA 11. Four credits.

MA 14. High and Low Tension Magnetos. A complete study of all low and high tension magnetos as to design, construction and operation. Prerequisite, MA 11. Spring quarter. Four credits.

MA 15. Special Course in Ignition, Starting and Lighting for Car Owners. The course will cover the care, operation, adjustment, and methods of locating all electrical troubles on the storage battery, starting

motors, generators, ignition units, lighting, and other electrical equipment used on the modern automobile. It should be especially interesting and valuable for anyone who drives an automobile. Open to both men and women. Two lectures and one laboratory or demonstration period. The course will be repeated each quarter. Three credits.

MA 111. Starting, Lighting and Ignition Systems. A complete study of the modern starting, lighting and ignition systems, their operation, design and construction; and direct current motor and generator; voltage and current regulation by vibration relays; third brush; battery cutouts; reading and drawing of wiring diagrams and electrical devices. Ample practice is given in disassembling an assembling, also trouble shooting. Testing and adjusting of the various units is taken up, to enable the students to handle such work in the repair shop. Prerequisites, MA 11, 13, and 14. Fall quarter. Four credits.

MA 112. Motor and Generator Repair and Armature Winding. A thorough study of direct current starting motors and generators; their construction, operation and repair including armature field and communicator testing; a systematic location and repair of all troubles encountered in the modern starting motors and generators; armature winding, as far as is practical for modern up-to-date garages and service stations. Prerequisite, Ignition 111. Winter quarter. Four credits.

MA 113. Ignition Trouble Work. The systematic location of trouble, service work, adjustable and minor repairs. Spring quarter. Four credits.

MA 114. Storage Battery Repair and Shop Management. This course should prepare a student to handle a storage battery service station and repair shop. Considerable practice in the diagnosis of storage battery troubles, rebuilding of batteries, servicing of new batteries and winter storage methods. It will also include methods and commercial management cost and installation of battery shop equipment. Spring quarter. Four credits.

MA 115. Automotive Electrical Equipment and Shop Management. This course should prepare a student to handle an Automotive Electrical service station and repair shop. Considerable practice in the wiring, trouble shooting and repair of all kinds of electrical equipment. Shop kinks and the development of skill, accuracy and speed to prepare the student better to compete with those already in the commercial field, will be given. Business methods and commercial management, also costs and proper in-

stallation of shop equipment. Prerequisite, Starting, Lighting and Ignition 112. Spring quarter. Three credits.

(Not given 1929-30)

MA 123. Practical Electricity. Required of all students who prepare to teach in Junior High Schools. This course will include a consideration of the fundamental principles of electricity and their application in the construction of such projects as bell circuits, house wiring, electro-magnet, heating elements, motor generators, transformers. Spring quarter. Four credits.

PRACTICAL RADIO CONSTRUCTION AND SERVICE

The aims and purposes of courses MA 23, 24, 25, are to acquaint students with the units used in radio reception and broadcasting; their construction, and operation; methods of locating troubles; also the building and repair of radio receiving sets.

Students will be required to pay a laboratory fee or deposit, and to purchase all necessary material and equipment to be used in the building of their sets. Cost should not exceed \$30.00 for the three quarters work.

MA 23. Principles and Operation of Radio Receiving Sets. Fundamental operating principles of radio receiving sets, kinds and types of antennae and their installation, the installation and connecting of battery sets, function and operation of vacuum tubes, "A", "B", and "C" batteries, condensers, coils, transformers, etc., introducing radio frequency detection and audio frequency, building and operating of crystal receivers, and one, two, three, and four tube regenerative sets. Fall quarter. Four credits.

MA 24. Radio Receiving Sets. A continuation of MA 23. The more completed circuits, the building and wiring of these sets, more advanced work in radio frequency detections, audio frequency and regeneration, inductive resistance, transformer coupling, and tuning; operation and repair of head phones, loud speakers, magnetic and dynamic speakers. Winter quarter. Four credits.

MA 25. Building and Testing, and Trouble Shooting of Radio Receivers. A continuation of MA 24, going into the A. C. operated receiver, principles and operation of A. C. power packs, A. and B. eliminators, tube testing, testing and tracing of circuits, method of locating troubles and tuning condensers, servicing sets, building of more advanced circuits, elements of broadcasting and public address systems. Spring quarter. Four credits.

OXY-ACETYLENE ELECTRIC ARC AND RESISTANCE WELDING

RESISTANCE WELDING

MA 21. Oxy-actelylene and Electric Welding. The oxy-acetylene welding process, equipment and gases, properties of the various metals, etc. Practice in the welding of cast iron, steel, aluminum, and other metals is given, also the proper methods of pre-heating and the preparation of cylinder clocks and other castings that are to be welded in the latter part of the course. A special fee of \$25.00 is required for all students taking this course. Winter quarter. Three credits.

Powell

MA 22. A continuation of course 21. Time and credit to be arranged.

Powell

FORGING AND GENERAL BLACKSMITHING

All courses taught by S. R. Egbert, Assistant Professor

An average of one-third of the time in all courses in forging is spent in demonstrating and lecturing. All courses are given in the forge rooms, Mechanic Arts building.

MA 31, 32, 33. Forge Practice. Forging, welding, tempering, tool making and other operations essential to forge work. Open to Vocational Students. Fall, Winter, and Spring quarters. Section 1, Three credits. Section 3, three credits. Section 4, two credits.

MA 34, 35, 36. Forge Shop Operation. Advanced and general repair work, including plow work, spring work, axle and tire setting, and horse-shoeing. Prerequisites, Forge Practice 31, 32, 33. Fall, Winter, and Spring quarters. Section 1, three credits. Section 2, five credits.

MA 37, 38, 39. Select Work from Forge Practice 31, 32, 33. For automobile and tractor students who cannot spend each day in the shops. Fall, Winter, and Spring quarters. Section 1 and 3, three credits each quarter. Section 4, two credits.

MA 40, 41, 42. Farm Shop Work. This course is especially arranged for students in agriculture. The application of forging operations to repair on the farm. The repairing of the following farm implements will be included

in the course: plow, harrow, wagon, hay-rake, mowing machine, binder, header, etc. Making and tempering punches and cold chisels, sharpening and tempering harrow teeth, picks etc. Welding. Fall, Winter, and Spring quarters. Two credits each quarter.

MA 131. Advanced Shop Practice. Composition and head treatment of steel. The student may emphasize any line of blacksmithing work that suits his particular needs. Prerequisites, Forging 34, 35, 36. Five credits. Credit will be given for unfinished courses according to work done. Not less than two credits will be given.

MA 132. Smith-Hughes Unit. Metal Work. Cold metal, hot metal, soldering, sheet metal, and plumbing. Fall and Spring quarters. Three credits each quarter.

MA 133. Foundry. Operated for demonstration and themaking of castings. If sufficient number of students apply, the foundry will be run for instructional purposes also.

MA 134. Smith-Hughes Course. Including cold metal, soldering and sheet metal. Monday, Wednesday and Friday from 2:00 to 5:00 during the last half of Spring quarter. One and a half credits.

For related work given during first half of the quarter see Department of Woodwork, MA 168.

MACHINE WORK

All courses taught by Aaron Newey, Associate Professor.

The courses offered in the Machine Work Department give good basic training for the student who is thinking of a career along any line of mechanical work. The operations and principles taught will help in advancement in many lines of mechanical endeavor. Students preparing for engineering, electrical work, auto-mechanics, aviation mechanics, ignition, tractor work, farm machinery; and those interested in model building, research, and experimenting, can well afford to take machine work; for it gives training in the use of the essential metal working tools.

All courses in Machine Work are open to vocational students.

MA 51, 52, 53. Machine Shop Practice. Lathe, planer, shaper, and drill-press operations, the use of hand tools, laying out, making automobile and machine parts, and other operations that are essential in machine shop practice. These courses include assignments of reading on machine work subjects, and the application of mathematics to machine work. Fall, Winter, and Spring quarters. Five credits each quarter.

NOTE: MA 51, 52, 53 may not be used to fill requirements for major.

MA 54. **Short Course.** Work selected from Machine Shop Practice 51. Fall, Winter, and Spring quarters. Section 1 and 2, three credits. Section 3 and 4, two credits.

MA 55. **Advanced Short Course.** Work selected from Machine Shop Practice 51 and 52. Prerequisite, Short Course 54. Fall, Winter and, Spring quarters. Section 1 and 2, three credits. Section 3 and 4, two credits.

MA 56, 57, 58. **General Machine Work.** Advanced lathe, planer and milling machine work, grinding milling cutters, gear cutting, making tools and special shop equipment. Prerequisite, MA 53. Fall, Winter, and Spring quarters. Five credits each quarter.

MA 151, 152, 153. **Tool Making.** These courses include practice in making arbors, guages, taps, reamers, milling cutters, etc., and in designing and building special tools and equipment. Prerequisite, MA 58. Five credits each quarter.

MA 155. **S. H. Teachers' Machine Course.** This course is planned to give a student, who is training to become a shop-work teacher, a general training in the operations and methods of doing machine work. Its purpose is to broaden his understanding of mechanic arts and make him more proficient in tool processes and in the care and repair of school shop equipment. Only students of senior standing may register. From two to nine credit. Time and credit to be arranged with the instructor.

NOTE:—For unfinished courses credits will be given according to work done, provided the student re-registers. Not less than two credits will be given.

WOODWORK

The shops, are open daily from 8:00 to 12:00, and from 2:00 to 5:00, except Saturdays.

Regular five credit courses run five days a week, three hours a day, during Fall, Winter, and Spring quarters. Three hours a week throughout the quarter are required for each credit.

All courses in Woodwork are open to vocational students.

MA 61. **Elementary Woodwork.** Scarfing, mortising, dovetailing and jointing. Proper handling of tools is emphasized.

Hansen

MA 62. **Elementary Woodwork.** Panels, sashes, doors, etc.; also thorough practice in tool sharpening.

Hansen

MA 63. **Elementary Woodwork.** Feedhoppers, trestles, gates, grindstone, frames, beehives, etc., and simple furniture.

Hansen

NOTE: Courses 61, 62, 63, may not be used to fill requirements for major.

MA 64, 65, 66. **Mill Work.** The use of wood working machinery, building of a modern work bench and tool chest, elementary wood turning. Prerequisite, MA 63.

Swenson

MA 67, 68, 69. **Housebuilding and Cabinet Making.** Framing and roofing, door frames and window frames, French doors, casing up, and finishing. Also furniture in fir and oak, staining, fuming, etc.

Swenson

MA 70. **Farm Woodwork.** A special course for students in the Winter term. Embraces such problems in wood work as are commonly met on the farm.

Hansen

MA 71. **Wood Carving.** Simple problems in straight and curved lines, conventional ornamentation and designs. Time and credit to be arranged with the instructor.

Swenson

MA 161, 162, 163. **Advanced Woodwork.** Special furniture in hardwood, mahogany, walnut, etc., including advanced wood turning, veneering, inlaying, and hand polishing. Prerequisite, MA 69.

Swenson

MA 164. **Pattern Making.** Making of practical patterns for use in the college foundry. Time and credit to be arranged with the instructor.

Swenson

MA 165. Advanced Short Course. For students who do not fit into the regular schedule. Prerequisite, work equivalent to that listed under courses numbered below 100.

Swenson

MA 166. Picture Framing. Making of simple mouldings and frames, finishing, mat cutting, mounting and fitting. May be had in connection with the advanced courses in woodwork. Time and credit to be arranged with the instructor.

Swenson

MA 167. Wood Finishing. Paints, oils and their manufacture, water, oil and spirit stains. Varnishes, kinds and preparation. May be taken any quarter if six or more students apply. One lecture a week each quarter. One credit. Time to be arranged with the instructor.

Hansen

MA 168. Smith-Hughes Course. A course designed to meet the needs of teachers in Smith-Hughes work and for students in agriculture. Consists of tool sharpening and farm woodwork, form setting and concrete work, framing and housebuilding, leather and rope work.

For related work given last half of the quarter see Department of Forging, MA 134.

Swenson

MILITARY SCIENCE AND TACTICS

MARTIN J. O'BRIEN, Major, C. A. C., Professor; HERBERT B. KRAFT, First Lieutenant, C. A. C., JOHN L. HANLEY, First Lieutenant, C.A.C., Assistant Professors; EUGENE J. CALLAHAN, First Sergeant, D. E. M. L., Instructor.

The Utah State Agricultural College, having accepted the provisions of the Act of Congress approved July 2, 1862, is classified as a Land Grant College and is therefore obliged to offer a course in military science and tactics as a part of the College curricula.

Recognizing that preparation for the national defense is one of the important duties of citizenship, and that qualities of patriotism, loyalty, discipline, leadership, and respect for constituted authority inculcated by proper military training are valuable in the formation of character, it has been the consistent policy of the College to cooperate with the Federal Government in making the Department of Military Science and tactics as effective as practicable.

To this end, military training has been made a required subject for all male students qualified and eligible therefore. Two years' training in the basic course is required of such students in all Schools of the College unless excused by proper authority.

At the request of the College authorities a senior unit of the Reserve Officers' Training Corps was authorized at this Institution by the President of the United States under the provisions of Section 33 of the Army Reorganization Act of June 4, 1920. Accordingly, the Board of Trustees has agreed to maintain a course in Military Science and Tactics as a required subject for all able-bodied male students during their first two years at the College.

The primary object of establishing units of the Reserve Officers' Training Corps is to qualify students for appointment in the Officers' Reserve Corps of the United States Army. This training will also be as valuable to the student in his industrial or professional career as it would be should the nation call upon him to act as a leader in its defensive forces.

Enrollment in the Reserve Officers' Training Corps is not in any sense "conscription," nor does it convey liability to service in any component or branch of the United States Army. As its name implies, the R. O. T. C. is an instrument of training and instruction only.

REQUIREMENT IN MILITARY SCIENCE

Two years of military training are required of all able-bodied male students. By regulation of the College the course is required during the first and second years at the Institution.

No male student will be excused from the requirements in military science except for the reasons as listed on page 00 of this catalogue.

Any student claiming exemption for any valid reason will be required to present a petition on the prescribed form which may be obtained at the office of the Professor of Military Science and Tactics.

RESERVE OFFICERS' TRAINING CORPS

The four years course in the Reserve Officers' Training Corps is divided into the basic course and the advanced course.

The basic course consists of the first two years in Military Science and corresponds to the freshman and sophomore years. When entered upon by any student it shall, as regards such student, be a prerequisite for graduation unless he is relieved from this obligation by proper authority.

The advanced course consists of the third and fourth years of Military Science, and corresponds to the junior and senior years. Entrance upon the advanced course is elective, but once entered upon such course becomes a prerequisite for graduation, in accordance with the terms of the establishment of the Reserve Officers' Training Corps.

UNIFORMS AND EQUIPMENT

A serviceable uniform of standard army pattern is furnished by the War Department to each student taking military training. Shoes are not furnished. Each student should provide himself with a pair of high tan shoes, not lace boots, before entering the College, as they will be required immediately upon his admission.

Every student registered for military science is required to make a uniform deposit of \$5.00. A laboratory fee of \$1.00 will be deducted from this deposit. The balance, less the cost of any property lost or damaged, will be refunded upon the completion of the year or upon withdrawal from the course.

The uniform and equipment issued for the use of student remains the property of the United States. At the end of each year, or at such other times as students may terminate their military training, all clothing and other supplies will be returned in a serviceable condition, not later than one week following the termination of such training. Articles which have been lost, damaged, or destroyed will be charged against the student concerned.

BASIC COURSE

Students in the basic course are required to pursue their courses diligently until satisfactorily completed, and to meet such requirements for the care of equipment as may be prescribed. In case of failure in any quarter of the freshman or sophomore years, the student will be required to repeat the work during the next quarter in residence.

Students who complete the two years' basic course are qualified as non-commissioned officers in the organized reserve, to which position they are appointed if they so desire.

ADVANCED COURSE

The advanced course is elective.

The general prerequisites for admission to the advanced courses are:

- a. Completion of two years' training in the basic course in any senior unit of the Reserve Officers' Training Corps.

b. Selection for further military training by the President of the College and the Professor of Military Science and Tactics.

c. The execution of an argeement in writing whereby the student in consideration of the commutation of subsistence furnished to him, agrees:

- (1) To continue in the Reserve Officers' Training Corps during the remainder of his course in this College.
- (2) To devote a minimum of five hours per week during this period to the military training prescribed.
- (3) To pursue such courses of camp training during this period that may be prescribed by the Secretary of War.

d. The student must be registered in one of the Schools of the College as an undergraduate while pursuing the advanced course.

Each student enrolled in the advanced course will be paid commutation of subsistence at the rate of thirty cents per day from the beginning of the first year of the advanced course to the end of the second year of the advanced course, except while attending camp, when the student will be subsisted in kind.

The course of camp training is for six weeks during the summer vacation, normally following the student's completion of the first year of the advanced course. The United States furnishes uniforms, transportation to and from the camp at the rate of five cents per mile, and subsistence for students attending the training camp. Students are also paid at the rate of seventy cents per day during their attendance at camp.

R. O. T. C. BAND

A military band is an element of the Reserve Officers' Training Corps, under the direction of the Band Instructor, and is governed by the rules of the Department of Military Science and Tactics. Uniforms and instruments are furnished by the War Department.

Members of the band will be selected from among those students who are registered in Military Science and who have demonstrated their ability for such selection. Tryouts for the band will be conducted under the supervision of the Band Instructor and will be held preferably during the first two weeks of each quarter.

Students who are selected for the band will be required to take such theoretical work in Military Science as may be prescribed by the Professor of Military Science and Tactics, and sufficient practical drill to insure their making a creditable appearance in ranks.

Instruction taken by members of the band is credited as instruction in Military Science, but will not be accepted toward qualification for admission to the advanced course.

CREDITS

Students who satisfactorily complete the basic course receive one credit hour per quarter, which is included in the 180 credit hours required for graduation.

Students who satisfactorily complete the advanced course receive three credit hours per quarter, which counts toward the 180 credit hours required for graduation. In addition, students enrolled in the advanced course will receive three credit hours for satisfactory completion of the six weeks course at the training camp, held during the summer, between the junior and senior years.

Students majoring in the Schools of Arts and Science and Engineering may submit Advanced Military Science as a minor for graduation.

Members of the band who successfully complete the work in the various quarters receive credits as follows: First and Second years, one credit per quarter in Military Science.

COURSES OF INSTRUCTION

Classes in Military Science will not be held at times other than as scheduled herein, but any student desiring extra instruction may make the necessary arrangements with the professor of Military Science and Tactics.

BASIC COURSES

101. Military Science. First Year. Fall quarter. Three hours per week. One credit.

Instruction during this period will include infantry and Artillery drill; ceremonies; military courtesy and discipline; military policy; rifle marksmanship.

Kraft and Hanley

102. Military Science. First year. Winter quarter. Three hours per week. One credit.

Instruction during this period will include infantry and artillery drill; Coast Artillery instruction (second class subjects).

Kraft and Hanley

103. **Military Science.** First Year. Spring quarter. Three hours per week. One credit.

Instruction during this period will include infantry and artillery drill; ceremonies, inspections, military hygiene and first aid; Coast Artillery instruction (second class subjects).

Kraft

201. **Military Science.** Second Year. Fall quarter. Three hours per week. One credit.

Instruction during this period will include drill and command (infantry and artillery): ceremonies; Coast Artillery instruction (first class subjects).

O'Brien and Hanley

202. **Military Science.** Second Year. Winter quarter. Three hours per week. One credit.

Instruction during this period will include drill and command (infantry and artillery); Coast Artillery instruction (first class subjects).

O'Brien

203. **Military Science.** Second Year. Spring quarter. Three hours per week. One credit.

Instruction during this period will include drill and command (infantry and artillery); ceremonies; inspections; Coast Artillery instruction (first class subjects).

O'Brien

R. O. T. C. BAND COURSES

101B, 102B, 103B. **R. O. T. C. Band.** First Year. One credit per quarter.

Kraft

201B, 202B, 203B. **R. O. T. C. Band.** Second Year. One credit per quarter.

Kraft

ADVANCED COURSES

301. **Military Science.** First Year. Fall Quarter. Five hours per week. Three credits. Prerequisite, Military Science 203.

Instruction during this period will include military map reading and sketching; drill and command; drill regulations and Coast Artillery instruction (expert subjects).

Hanley

302. **Military Science.** First Year. Winter quarter. Five hours per week. Three credits. Prerequisite, Military Science 301.

Instruction during this period will include drill and command; gunnery; Coast Artillery instruction (expert subjects).

O'Brien

303. **Military Science.** First Year. Spring quarter. Five hours per week. Three credits. Prerequisite, Military Science 302.

Instruction during this period will include drill and command; gunnery; conduct of fire; analysis of drill and service practice.

O'Brien

401. **Military Science.** Second Year. Fall Quarter. Five hours per week. Three credits. Prerequisite, Military Science 303.

Instruction during this period will include drill and command; artillery material; military law; administration and supply.

O'Brien

402. **Military Science.** Second Year. Winter quarter. Five hours per week. Three credits. Prerequisite, Military Science 401.

Instruction during this period will include drill and command; motor transportation; military history; artillery tactics.

Hanley

403. **Military Science.** Second Year. Spring quarter. Five hours per week. Three credits. Prerequisite, Military Science 402.

Instruction during this period will include drill and command; field engineering; orientation.

Hanley

HOME ECONOMICS

JOHANNA MOEN, *ALICE KEWLEY, CHRISTINE B. CLAYTON, Professors; CHARLOTTE DANCY, Assistant Professor; HELEN PIXTON, Instructor; HELEN EADES, Instructor.

FOODS AND DIETETICS

Students who elect Foods and Dietetics as their major are required to complete the following courses: Foods 20, 21, 30, 105, 106, 107, 140, and 141. Foods 143 and 192 are recommended for all Foods majors in their Senior year. Closely related courses such as Inorganic Chemistry, Organic Chemistry, Physiological Chemistry, Bacteriology, Physiology, General Economics, and Botany are recommended for all Foods and Dietetics majors.

5. **Food Selection.** A practical study of the relation of food to health. Natural food groups and their relation to each other are studied through menu making and the selection of foods in public eating houses. Not open to Foods and Dietetics majors. Winter quarter. Two credits.

Pixton

9. **Meal Preparation.** This course includes practice in the cooking and serving of meals as well as a discussion of the fundamentals of cookery and meal planning. Not open to Foods and Dietetics majors. Spring quarter. Three credits.

Pixton

20, 21. **Food Study and Meal Preparation.** A study of the food classes, methods of preparation, serving, and the principles of nutrition. This course is designed for Home Economics students only. Fall and Winter quarters. Five credits each quarter. Three laboratories and lecture periods combined. Outside preparation required.

Pixton

30. **Food Economics.** This course aims to train the student to become an intelligent consumer. The production, manufacture, and consumption of food products is studied. A comparison of the quality and cost of manufactured food products is made. Prerequisites, Inorganic Chemistry and General Economics. Spring quarter. Three credits.

Pixton

*Absent on Leave.

105. Food Preservation. The preservation of foods by canning, preserving, pickling; storage and refrigeration is included in this course. Prerequisites, Food Preparation, Food Economics, Bacteriology 1. Fall quarter. Three credits.

Clayton

106. Food Engineering. This course consists of a study of the most efficient methods of preparing and serving meals at a minimum cost of money, time, and energy. Prerequisites, Food Economics and Food Preparation. Winter quarter. Three credits. Laboratory and Lectures.

Clayton

107. Catering. Meal preparation and service suited to various social occasions. Commercial projects in the purchase, preparation and serving of food are undertaken. Prerequisite, Food Engineering. Spring quarter. Three credits.

Clayton

111. Nutrition (for Athletes and P. E. majors). A practical study of nutrition in relation to health with emphasis on the needs of the body during muscular activity. Fall quarter. Two credits.

Clayton

140. Dietetics. A review of the fundamentals of Biochemistry most closely related to the nutrition of man. The quantitative basis of human nutrition is studied and illustrated through laboratory procedure in the calculation and preparation of dietaries. This course is open to Foods and Dietetics majors and students of medicine. Prerequisites, Organic Chemistry, and Food Study. Fall quarter. Four credits.

Clayton

141. Advanced Nutrition. Nutrition in health and disease. Biological analysis of foods illustrated by problems in animal feeding. Prerequisite, Dietetics. Winter quarter. Four credits.

Clayton

43, 143. Nutrition Work with Children. This course is designed especially to suit the needs of teachers, health workers, and parents. The nutritional requirements for growth and development will be emphasized. Devices for the teaching of correct eating habits will be demonstrated. Spring quarter. Two credits.

Clayton

160. **Experimental Cookery.** Advanced students may select a problem in experimental cookery and receive one unit of credit for one three-hour laboratory period a week.

Clayton and Pixton

192. **Readings in Nutrition.** Introduction to problems in nutrition through assigned readings and reports of current literature. Spring quarter. Two consecutive hours once per week. Two credits.

Clayton and Pixton

210. **Research.** Investigation of problems concerned with food preparation or nutrition. Time and credit to be arranged.

TEXTILES AND CLOTHING

Students who elect Textiles and Clothing as their major are required to complete the following courses: Textiles and Clothing 10, 20, 30, 105, 115, 125, 160.

1, 2. **Elementary Clothing.** This course aims to emphasize the relation of the personality to dress through the study of art principles applied to clothing construction; pattern study, selection and construction of under-clothing, and dresses. Lectures and laboratory work. Three credits each quarter. Fall, Winter, and Spring quarters. Student may enter at beginning of course only.

Eades

5. **Dress Appreciation.** This course aims to develop an appreciation of appropriateness and good design in dress. Clothing Economics and hygiene will also be discussed. Two credits. Fall quarter. Repeated in Spring quarter.

Eades

10, 11. **Clothing and Handwork.** A study of the fundamental principles of drafting, design, and pattern making; selection and construction of underwear, dresses, and household furnishings. Prerequisites, Art 1, 2, 3. Fall, Winter, and Spring quarters. Three credits each quarter.

Moen and Eades

20, 21. **Economics of Textiles.** Part 1 is a study of standard textiles from the standpoint of growth, structure, preparation, design, and relative value of materials for clothing and house furnishing. Attention is given to the historical and economic phases of the textile industry.

Part 2 includes identification of fibers and substitute material by means of the microscope and physical tests. The aim of this work is to form a basis for intelligent purchase and use of materials. Prerequisites or parallel courses, Economics 50 and 51. Fall and Winter quarters. Three credits each quarter.

Moen

30. Millinery. Special study of individual problems in selection of hats; blocking felt and straw hats; designing in paper. Application of principles of making fabric hats; flower making. Prerequisites or parallel courses, Art 1, 2, 3; Textiles 10, 11 or their equivalents. Spring quarter. Three credits.

Eades

50. Textile Selection. Judgment in selection of textiles in relation to design, quality and cost as affected by economic and social factors. Fall quarter. Three credits.

Eades

105. History of Costume. A survey of ancient Egyptian, Grecian, Roman, early and modern French costumes. It aims to give practical information for the use of students and teachers of Clothing, Costume Design, and physical Education Majors. Fall quarter. Three credits.

Moen

115. Costume Design. Art structure in its application to dress. Studies of personality and types of people; harmonies in spacing, rhythm, balance, color theory. Designing for various occasions. Outside work required. Prerequisites, Art 1, 2, 3. Winter quarter. Three credits.

Eades

125. Applied Costume Design. This course gives practical training in the application of the principles of costume design, color harmony, texture, for different individuals and purposes. Practice in constructive design is given by modeling in cloth on the dress form. Outside work required. Spring quarter. Three credits.

Eades

140. Applied Decoration. This course includes principles of design in relation to decoration of dress and household furnishings. Various means will be used in developing simple decorations for all types of garments, table linen, household furnishings. Outside work required. Prerequisites, Art 1, 2, 3, and Textiles 10, 11. Spring quarter. Three credits.

Moen

160, 161, 162. Advanced Problems in Clothing. Special application of principles of design and construction to tailored garments, afternoon and evening dresses, infant's and children's clothing. Demonstrations and

laboratory work. Prerequisites, Textiles 10, 11, 20, 105, 115, 125. Fall, Winter and Spring quarters. Two credits each quarter.

Moen

190. **Special Problems.** Arranged for advanced students in Textiles and Clothing, working out problems of special interest, reading and reports. Time and credits to be arranged.

Moen

For closely related courses see Merchandising 51. (Psychology of personal Selling.) 151. (Problems in Merchandising)

Chemistry 109 (Textile Chemistry). Students who elect Textiles and Clothing as their major are urged to take this course.

HOUSEHOLD ADMINISTRATION

Students who elect Household Administration as their major are required to complete the following courses: Household Administration 10, 25, 122, 123, 125, 130, 149, 150. Students wishing to qualify as teachers of Household Administration must complete Education 119, 120, and 122.

All students interested in the welfare of the child are advised to register for the following courses: Mothercraft, Nutrition Work with Children, Child Psychology, Infants and Childrens Clothing, Family Relations, Social Problems of the Family, Child Development, Social Hygiene.

10. **Survey in Home Economics.** Designed to serve as an introduction to College Home Economics; a survey of the field of study of the Home Economics movement in America. Special emphasis on the wise use of time, energy, and money. Open to all college women. Winter quarter. Two credits.

25. **Care of the Sick.** A course in home nursing, and first aid to the injured. The first hour is devoted to discussion; the laboratory to demonstrations and practice. Reading of reference works and writing of special reports. Laboratory apron required. See instructor. Fall, Winter, or Spring quarter. Two credits. Class limited to 16.

Dancy

125. **Mothercraft.** The course includes the anatomy and physiology of the reproductive system. The preparation for motherhood. The physical care of the mother and child from the prenatal period to the end of the first year of the child's life. Prerequisite, Physiology 4. Fall or Winter quarter. Three credits. Section limited to 20.

Dancy

130. Child Development. Physical growth and development of young children. Afternoon round table, time to be arranged.

149. Household Management. A study of the problems pertaining to administration of home; expenditure of family income, household accounts, selection and care of household furnishings, problems of cleaning, seasonal tasks, schedules of work for member of family group. Spring quarter. Two credits.

150. Family Relations. This course deals with a consideration of the relations of the members within the family group, as child to child, child to parent, and parent to parent. The emphasis is on a study of the ideals fundamental to wholesome family life. Laboratory projects will consist of the application of the underlying principles of household management during the period of residence in the Home Economics Cottage. A fee of \$7.00 per week will be charged each student while in residence. Open to seniors only. Prerequisites, Foods 105, 106, 107, and Textiles 20 and Household Administration 119. Household accounts recommended. Two lectures a week, in addition to the laboratory projects in the cottage. Lecture, Fall quarter. Two credits. Laboratory, Fall, Winter, or Spring quarter. Three credits.

Closely Related Courses:

Accounting 107. Household Accounts. The practical application of accounting principles to home management problems. Lectures and assigned practice problems. Spring quarter. Four credits.

P. E. Peterson

Art 122. Home Planning, Construction and Design. The principles of home design, garden design, house construction, heating, sanitary equipment, etc., together with painting, color and wood finishing will comprise the course. Fall quarter. Three credits.

Fletcher

Art 123. Interior Decoration. Decoration and furnishing of interiors, including furniture, walls, tableware, pottery, pictures, flowers, and the practical assembling of all features which go to make the home beautiful. Winter quarter. Three credits.

Fletcher

Art 126. History and Appreciation of Architecture. The characteristics of the great historic styles of building, and their evolution, will be stud-

ied with the aim of developing good taste and judgment in this field at the present time. Spring quarter. Three credits.

Fletcher

Education 119. **Methods of Teaching Home Economics.** A course designed for teachers. The function of home economics in the elementary and high school. Selection of subject matter. General discussion of methods in teaching Home Economics. Planned to serve as an introduction to Education 120. Spring quarter. Three credits.

Education 120. **Problems in Teaching Home Economics.** Teaching methods analyzed in their application to different phases of Home Economics. Study of textbooks, illustrative material and equipment. Testing results of instruction. Prerequisite, Education 119. Students without Education 119 are admitted to this course only by special permission of instructor. Fall quarter. Three credits.

Education 122. **Practice Teaching in Home Economics.** Supervised observation of all phases of home economics teaching in various schools of the state. Each apprentice teacher is required to teach a minimum of 30 successful lessons. Round table discussions and individual weekly conferences to parallel practice teaching. Prerequisites, Education 120. Fall, Winter, or Spring quarter. Five to eight credits.

Sociology 171. **Social Problems of the Family.** In this course the relations of the family with outside groups, agencies and institutions are stressed. Attention is also paid to the inter-relation between the different members of the family. Home life is treated as a changing, developing, basic organization which should be in constant reciprocal relation with outside agencies. Winter quarter. Three credits.

Hendricks

Psychology 110. **Psychology of Infancy and Early Childhood.** Prerequisite, Psychology 101 or equivalent. A study of the behavior of infants and small children. Spring quarter. Three credits.

Henry Peterson

THIRTY-SIXTH ANNUAL COMMENCEMENT

List of Graduates 1928-29

GRADUATE DIVISION

GRADUATES WITH THE DEGREE OF MASTER OF SCIENCE

SCHOOL OF AGRICULTURE

R. KENNETH BISCHOFF
B. S. U. S. A. C., 1926

Thesis: "Correlated Inheritance in a Cross of F 22 X Dicklow Wheat".

B. IRA JUDD
B. S. U. S. A. C., 1928

Thesis: "Inheritance of Awns in a Cross Between Hard Federation and Kota Wheats."

SCHOOL OF ARTS AND SCIENCE

OSWALD CHRISTENSEN
B. S. U. S. A. C., 1914

Thesis: "An Index of Friability of Soils".

I. LAVELL COOLEY
B. S. U. S. A. C., 1925

Thesis: "The Stratigraphy of Devonian Formation."

E LORIN C. FIFE *Logan*
B. S. U. S. A. C., 1928

Thesis: "Bionomics of the Clover Leaf Weevil, *Hypera Punctata* (Fabr.) in Utah".

FLORENCE GREAVES
B. S. U. S. A. C., 1928

Thesis: "The Bacterial Content of Candy".

JOSEPH DUDLEY GREAVES
B. S. U. S. A. C., 1928

Thesis: "The Micro-flora of Alkali Soil."

UTAH STATE AGRICULTURAL COLLEGE

HAROLD PETERSON

B. S. U. S. A. C., 1917

Thesis: "A Comparison of Lithologic Units in Utah, Southeastern Idaho and Western Wyoming".

HAMLET C. PULLEY

B. S. U. S. A. C., 1925

Thesis: "Ammonification of Nitrogenous Substances by Pure Cultures of Micro-organisms".

E ✓ CLIFTON H. SMITH

B. S. U. S. A. C., Summer 1928

Thesis: "The^r Relation of the Bean Trips, Heliethrips Fasciatus Pergande,^r to the Non-Setting of Bean Fruit".

E ✓ CHESTER H. SWINYARD

B. S. U. S. A. C., 1928

Thesis: "Certain^r Phases of the Internal Morphology of Paratrioza Cockerelli (Sule)."

CLAUDE E. ZOBELLE

B. S. U. S. A. C., 1927

Thesis: "Micro-flora of Root Beer Glasses."

SCHOOL OF COMMERCE

MAYA MARGRETHA FONNESBECK

B. S. U. S. A. C., 1928

Thesis: "Municipal Lighting of Logan City."

LEON D. HARDY

B. S. U. S. A. C., 1917

Thesis: "Trends and Tendencies of Retailing".

LORENZO H. HATCH

B. S. U. S. A. C., 1919

Thesis: "Should the Utah Law as it Applies to Inheritance be Modified?"

SCHOOL OF EDUCATION

ALVIN HESS

B. S. U. S. A. C., 1928

Thesis: "A Study of the Financial Considerations Offered Teachers of Utah As Inducement for Professional Growth with Comparisons Drawn from Some Other States".

UNDERGRADUATE DIVISION

Graduates with the Degree of Bachelor of Science

AGRICULTURE

Adams, John Redd
Bennion, Lyman Lindsey
Bingham, Golden Hansen
Burnham, Clarence
Christensen, Ivan
Cook, Raydolph D.
Crook, Royal D.
Cummings, Jos. D.
Dahle, Robert I.
Davis, James Edward
Eames, D. Ivo
Guymon, Evert Lee
Henderson, George. R.
Jenson, Evan Dewane

Jones, Henry D.
Keetch, Russell R.
Keller, Wesley
Littlefield, Ray A.
Monson, Wilford Russell
Paewai, Nireaha "Niki"
Petersen, Leland W.
Spalding, Curtis J.
Standing, Arnold Rudolph
Stark, Arvil L.
Wadley, Reif
Wixom, Calvin
Woodward, Marlow C.

HOME ECONOMICS

Aebischer, Matilda K.
Calder, Vera
Cannon, Mary
Christensen, Camille
Crook, Grace
Day, Arvilla Harriett
Fife, Coy
Frederick, Hilda
Gardner, Luree Snow
Gibbons, Lydia C.
Hanks, Ellen R.
Hansen, Bessie
Hansen, Marguerite
Haroldsen, Eva
Hill, Rita K.
Holmgren, Ethel
Jenkins, Eva Packer
Johnson, Lucile

Larsen, Arta Josephine
Leatham, Ruby
Lenkersdorfer, Pernecy Delilah
Linford, Zilla
Littlefield, Versa Joy
Loveless, Florence Page
Maughan, Sarah
McClellan, Maude
Morrell, Lillian
Orme, Lillian
Richards, Pearl
Shaw, Constance Mary
Smith, Ivy Lillian
Stuart, Melba W.
Tuddenham, Evelyn
Watkins, Dorothy
Webb, Florence M.
Wyatt, Elsie

CIVIL ENGINEERING

Affleck, Doyle P.

Miller, Horace

MECHANIC ARTS

Ballard, Reid H.
Fowler, Heber C.
Partington, William A.

Rogers, Noah
Smith, J. Rennell
Walker, Calvin

COMMERCE

Balls, Berdean Wilmer
Bullen, Reed
Darley, Byron
Frankhauser, Frederick
Geddes, Willard L.
Greaves, Cryus W.
Griffin, Charles M.
Haslam, George Smith
Hawkes, E. Earl
Kawkes, J. Irving
Hayward, William Budge
Hodges, Evelyn Clara
Hodges, LaMont Earley
Israelsen, Vernon L.

Jensen, Norman Joseph
Johnson, Lund Aldredge
Layton, Arthur F.
Martineau, George Allen
Merrill, Marriner H.
Phillips, Wendell Chamberlin
Rowe, Gustave Francis
Seamons, G. Vernal
Smith, J. Sermon
Sorensen, Wesley A.
Stanger, Glenn Steele
Sweeten, Orpha Amanda
Underwood, James T.
Waldron, Nello B
Wood, Gordon

ARTS AND SCIENCE

Baxter, Golden Stephen
Beal, Estella Franke
Benson, Donna
E Bowen, Myles F. *ms.*
Boyle, Stanley M.
Cannon, Allen
Cranney, Rita
Daines Jr., Robert H.
Z Dowdle, Verda E. *newton*
Fife, Karl
Fogelberg, Thelma
Forrester, Robert A.
Fowler, Loren D.
Froyd, Beryl
Furr, Carl Jethro
Garrett, Wanda
Gibson, Owen N.
Hammond, Weldon Woolf

Hansen, Gwendolyn
Hansen, Miriam Maycock
Hansen, Othello Tanner
Hart, Ruth
Jeppsen, Elmer
Jessop, Beatrice
Johnson, Dallas
Judkins, Leonard N.
Kirby, Harold J.
Larson, George
Larson, R. Vernon
Linford, Leo Hulme
E Maughan, Frank B. *Wellman*
McAlister, Helene Cornell
Muir, Maida
Nelson, Rebecca
Olsen, Nolan Porter
Parkinson, LaRue Hatch

Pedersen, Edith Faye
 Perucca, Emma
 Ricks, Edna Ione
 Rigby, Murland F.
 Salmon, Nelson H.
 Saxer, Alton H.
 Scoville, Therma
 Shepard, Florence Louise
 Skanchy, Sigrid A.
 Smart, Theron D.

E Smith, Clifton Henry *Logan, Mrs*
 Smith, Ronald C.
 Sorensen, Frederick Chester
 Sorenson, LaVell
 Sorenson, Stella
 Taylor, Truth
 Ward, Owen
 Whittle, Horace Y.
 Williams, Edgar Lamont
 Williams, Howard Winston

EDUCATION

Anderson, Sterling
 Bagley, Maxine
 Bown, Ovila
 Call, Vosco Peters
 Case, Helena Butterfield
 Davis, Hugh C.
 Edwards, Leah Cathryn
 Lamm, Marjorie M.
 Merrill, Venace Reese
 Morton, Jack Chase
 Neal, Jennie C.

Palmer, Evelyn
 Passey, Cleone Louise
 Rogers, LuDean
 Scorup, Stena
 Thomas, Elizabeth
 Tingey, Vance Henry
 Wade, Ellis Maycock
 Whittle, Tillie Jones
 Worthington, Thomas Glen
 Young, John A.

GRADUATION WITH HONORS

Cannon, Allen—English
 Dowdle, Verda E.—Entomology
 Sorensen, Frederick Chester—English

GRADUATES WITH THE NORMAL DIPLOMA

Allen, Mary Ina
 Allen, Phyllis LaVerne
 Anderson, Mildred
 Balling, Nina
 Carlisle, Martha
 Carrigan, Pauline
 Christensen, Dorothea
 Cooley, Marguerite
 Domgaard, Mignon
 Dudley, Myrtle
 Eames, Melba

Fife, Lucile
 Folkman, Serena
 Godfrey, Agnes
 Gourley, Roland M.
 Hall, Oreta
 Hammond, Marjorie
 Hansen, Alta Maurine
 Hanson, Mae
 Hart, Flora
 Heinrich, Mildred La Veda
 Hendricks, Virginia

Hillstrom, Mae
 Hogan, Muriel Billie
 Hulme, Helen
 Hunsaker, William Eldon
 Jenkins, Oriel
 Jenson, Ludella
 Jessop, Howard V.
 King, Helen Mildred
 Korth, Ethel P.
 Limb, Myrle
 Lindquist, Norene
 Lunt, Lois
 Marsh, Gweneth
 McCarrey, Lucille
 Morrison, Luey
 Mortensen, Pearl
 Nelson, Anna
 Nielson, Cleo
 Nielsen, Ruby Virginia
 Park, Jean

Parkinson, Evelyn
 Peart, ArDella B.
 Peart, Ina
 Petersen, Iven
 Peterson, Bessie
 Plowman, Melba LuRae
 Quinney, Bernice
 Robinson, Merla
 Schmidt, Leonora Clara
 Schow, Iris W.
 Seely, Leola
 Shrives, Thelma
 Sorenson, Sadie May
 Sperry, Mildred M.
 Spidell, Claire
 States, Marica
 Stirland, Verda L.
 Stout, Beulah
 Webb, Marjorie Joyce
 Williams, Leo

OFFICERS RESERVE CORPS OF THE ARMY OF THE UNITED STATES

Second Lieutenant, Coast Artillery Corps

Davis, James Edward
 Griffin, Charles McNeil
 Hammond, Weldon Woolf
 Jensen, Norman Joseph
 Layton, Arthur Frank
 Larson, George
 Olsen, Nolan Porter
 Partington, William Alma

Phillips, Wendell Chamberlin
 Scholes, Wallace Burnham
 Seamons, Vernal George
 Smith, Joseph Rennell
 Underwood, James Thomas
 Williams, Howard Winston
 Wixom, Calvin

HONORS 1928-29

SCHOLARSHIP A's

John Christensen
 Odell Julander
 George Morgan

William Morrell
 Elma Rowberry
 LaVell Sorenson

Fred Sorenson
 Pearl Richards
 Vance Tingey

HONORABLE MENTION

Helen Overfelt

Marjorie Taggart

Oralie Cragun

Evelyn Tuddenham

Edith Funk

Flora Hart

VALEDICTORIAN

Verda Dowdle

SCHOLARSHIPS

The following students were awarded the Johansen Scholarships for 1929-30:

Fay Harston

George Margon

H. B. Hunsaker

The Phi Upsilon Omicron Scholarship was awarded to Fern Shipley.

DEBATING AND ORATORY

Darrell Crockett

David Calder

Vernon Israelsen

William Morrell

The Hendricks Medal Won by:

Grant Redford

The Sons of American Revolution Medal Won by:

Donald Wadsworth

DRAMATICS

Lutie Bancroft

Gladys Hobbs

Emma Perucca

Ernest Nelson

Juanita Boyle

Emerson Abott

Allen Cannon

SPECIAL AWARDS

The Citizenship Award. A medal given for distinguished College Citizenship, was awarded to Thomas Glen Worthington.

The Reserve Officers' Training Corps Medal. Given to the member of the R. O. T. C. who best represents the ideal of the Corps, was awarded to James T. Underwood.

The William Peterson Science Medal. Given to the author of the best paper on some selected scientific subject, was won by George R. Henderson.

The Vernon Medal. Given to the writer of the best short story written around a western setting, was won by Arnold R. Standing.

The American Legion Scholarship Medal. Given to the Letterman maintaining the highest scholastic standing during the Football Season, was won by Alton H. Saxer.

The American Legion Military Medal. Given to the Letterman exhibiting the most wholesome attitude toward military training during the Football Season, was awarded to Carl F. Belliston.

The John M. Howard Medal. Given to the student who most nearly represents the ideal of the School of Home Economics, was awarded to Mrs. Eva Jenkins.

The Salt Lake Tribune Cup. Given for the best student stunt staged at the 1929 Ogden Livestock Show, was awarded to the U. S. A. C. Ag. Club.

The John M. Ritchie Trophy. Given to the student who ranks the highest in judging horses, was awarded to Lester Knight.

The John K. Madsen Trophy. Given to the student who ranks the highest in judging sheep, was awarded to Melvin Stephens.

The Ogden Union Stock Yards Trophy. Given to the student who ranks the highest in judging beef cattle, was awarded to Edward Ward.

The Salt Lake Union Stock Yards Trophy. Given to the student who ranks the highest in judging swine, was awarded to Elden Westenskow.

Live Stock Judging Medals. Given to the men who make the College Livestock Judging Team, were awarded to: Lee Guymon, Curtis J. Spaulding, Myron Childs, Lyman Bennion and Robert Dahle.

STUDENT OFFICERS

Lund Johnson	President
Ethel Holmgren	Vice-President
Merlin Shipley	Secretary
Joseph Cowley	Editor, "Student Life"
Cyrus Greaves	Business Manager, "Student Life"
Laura Bankhead	Editor-in-Chief, "Buzzer"
Carl Sheffield	Business Manager, "Buzzer"

LIST OF STUDENTS

1928-29

In the following list "a" stands for agriculture; "as" for arts and science; "e" for engineering and mechanic arts; "ed" for education; "ho" for home economics; "c" for commerce; "SS" for summer school; "G" for Graduate; "S" for Senior; "J" for Junior; "So" for Sophomore; "F" for Freshman; "V" for Vocational; "Un" for unclassified.

Abbott, Geo. Emerson	as-So	Tremonton	Andrews, Bergetta	as-F	Logan
Abbott, Jed	as-F	Tremonton	Andrews, Elva H.	SS	Logan
Abersold, Raymond	e-V	Providence	Ashbaker, C. Freeman	e-J	Logan
Adams, Alden Swapp	a-So	Kanab	Ashcroft, Elden LeRoy	a-F	Springville
Adams, Clare Lenora	ho-S-SS	Logan	Astle, Walter S.	a-F	Logan
Adams, Hazel	SS	Logan	Atkin, Ray	as-F	Beaver
Adams, John R.	a-S	Parowan	Ault, Dorothy	c-So	Logan
Adams, Lewis J.	a-F	Parowan	Austin, James W.	SS	Denver, Colo.
Adams, Willis J.	a-F	Brigham	Averette, Grant	as-F	Heber
Adamson, Herbert	SS	Richmond	Backman, Edna	ed-So	Salt Lake City
Aebischer, Matilda	ho-S	Logan	Badger, Breta E.	ho-J	Green River
Affleck, Clark	as-J	Logan	Baer, Greta	c-F	Providence
Alder, Aldora	ho-J	Logan	Baer, Vernon	SS	Providence
Alder, Owen	a-F	Providence	Bagley, Maxine	as-S	Murray
Alexander, Glen M.	e-F	Panguitch	Bagnell, Kenneth	a-F	Coalville
Alexander, Ralph G.	a-F	Vernal	Bahen, Harry	a-So	Paradise
Alexander, Sadie	as-F	Vernal	Bair, Camilla	as-F	Logan
Alkire, Elizabeth H.	c-J	Logan	Bair, Mildred	as-F	Logan
Allen, Beatrice	c-So	Hyrum	Baird, Junius Peter	a-So	Brigham
Allen, Cynthia	SS	Hyrum	Baker, Glen	a-F	Boulder
Allen, Geolt	SS	Golden, Colo.	Baker, Margaret	SS	Logan
Allen, Hortense	ed-F	Logan	Baldwin, Thora	as-J	Salt Lake City
Allen, Ina Mary	ed-So	Richmond	Ballam, Phyllis	ed-S	Logan
Allen, James C.	as-F	Logan	Ballantyne, Leanne	SS	Logan
Allen, Jewell S.	ed-F	Logan	Ballantyne, Mary	SS	Logan
Allen, Phyllis LaVerne	ed-So	Logan	Ballard, Orlando D.	SS	Draper
Allen, Pollie LaRena	c-So	Malad, Idaho	Ballard, Reid H.	e-S	Cache Junction
Allen, Thomas Evans	a-V	Ogden	Ballard, Wm. Henry	c-So	Logan
Allison, George L.	SS	Portland, Ore.	Balling, Harold	a-F	Logan
Andersen, Mildred	ed-So	Brigham	Balling, Nina	ed-So	Logan
Andersen, Mourine E.	ed-F	Tremonton	Balls, Berdean	c-S	Hyde Park
Anderson, A. Edward	c-So	Logan	Bancroft, Guy R.	SS	Roy, Mont.
Anderson, A. E.	SS	Sandy	Bancroft, Lutie	as-So	Logan
Anderson, Abraham	SS	Lehi	Bancroft, Patsy	SS	Roy, Mont.
Anderson, Alvaretta	ho-F	Millville	Bangerter, Alma H.	a-So	Woods Cross
Anderson, Andrew P.	SS	Fillmore	Bangerter, Thelma	ed-F	Woods Cross
Anderson, Ann	SS	Logan	Bankhead, George E.	a-J	Logan
Anderson, E. A.	SS	Grantsville	Bankhead, Laura	c-J	Logan
Anderson, Ester R.	SS	Provo	Bankhead, Melvin J.	as-J	Logan
Anderson, Ethel S.	SS	Salt Lake City	Barber, Geo. Percy	as-G	Logan
Anderson, Farel G.	c-So	Heber	Barber, Marie D.	SS	Logan
Anderson, Geo. Wesley	ed-F	Logan	Barkdull, P. H.	SS	Logan
Anderson, Harold, S.	c-F	Green River	Barger, Cecil G.	e-F	Brigham
Anderson, John M.	c-F	River Heights	Barker, Wm. Theron	c-F	Newton
Anderson, LeVere	SS	Logan	Barnes, Josephine W.	as-F	Kaysville
Anderson, Melvin	a-F	Venice	Barnes, Orvil W.	a-F	Kaysville
Anderson, Melvin E.	a-G-SS	Logan	Barr, Forrest L.	as-F	Eureka
Anderson, Merrill B.	as-So	Logan	Barrows, Effie	ed-F-SS	Logan
Anderson, Nina	ho-J	Oak City	Barson, Hyrum John	e-V	Clarkston
Anderson, Sterling	ed-S	Grantsville	Bartlett, Herbert Wm.	as-J	Logan
Anderson, Vesta	as-So	Tremonton	Bartlett, Zelda	ho-F	Burley, Ida.
Andreason, Maynard	e-V	Tremonton	Barton, George	SS	Holden

Bartschi, Vernon e-J.	Providence	Bowen, Edith SS.	Logan
Bates, A. Parley as-S-SS.	Hooper	Bowen, Mona E. ed-F.	Logan
Baugh, Fred B. as-F.	Logan	Bowen, Morris J. ed-F.	Magna
Baugh, F. H., Jr. SS.	Logan	Bowen, Myles F. as-S.	Spanish Fork
Baxter, Golden S. as-S.	Hyrum	Bown, Beryl as-So.	Gunnison
Beal, Franke as-S.	Tremonton	Bown, Ovila ed-S-SS.	Gunnison
Beck, Furl A. SS.	Pleasant Grove	Boyle, Bernice c-F.	Logan
Beckstead, Melburn as-So.	Logan	Boyle, Juanita ed-J.	Logan
Beckstead, Raymond C. c-So.	Logan	Boyle, Stanley M. as-S.	Logan
Beckstead, Thelma Jean ed-F.	Logan	Boyle, Wm. Dean a-J.	Logan
Beckstrand, Olive M. as-F.	Logan	Bradshaw, Donald c-F.	Wellsville
Beckstrom, Marion SS.	Sandy	Bradly, Harold, SS.	Gunnison
Beecher, Elbert Ray a-F.	Brigham	Brady, Wm. W. SS.	Castle Dale
Beecher, P. E. SS.	Brigham	Branson, Edwin R. SS.	Columbia, Mo.
Bell, Donald H. SS.	Coral Gables, Fla.	Brenchley, Louis H. as-S.	Wellsville
Bell, Marion E. e-V.	Logan	Brenchley, Myron H. e-S.	Wellsville
Bell, Wm. Harold c-G-SS.	Logan	Brewer, Marjorie SS.	Ogden
Belliston, Carl F. as-F.	Nephi	Brian, D. Fount as-J.	Loa
Bennett, Gerald H. a-F.	Kaysville	Briggs, Mary L. ed-F.	Layton
Bennett, Leland W. a-F.	Kaysville	Briggs, Victor a-So.	Logan
Bennett, Ruth c-F.	Logan	Briscoe Dewey, SS.	Burley, Ida.
Bennion, Alden S. as-So.	Murray	Briskey, Earle L. c-F.	Eureka
Bennion, Donald C. e-F.	Farmington	Broadbent, Naomi SS.	Heber
Bennion, Lyman L. a-S.	Logan	Broberg, Paul e-J.	Logan
Bennion, Marion as-So.	Logan	Brockbank, Hazel SS.	Spanish Fork
Bennion, Vernal R. e-J.	Murray	Brooksby, Oscar e-V.	Provo
Benson, Donna as-S-SS.	Logan	Brown, Bessie SS.	Hyrum
Benson, Floraine as-J-SS.	Fielding	Brown, Effie (Mrs.) SS.	Logan
Benson, John SS.	Garland	Brown, Faye ed-F.	Logan
Benson, Serge N. c-G-SS.	Logan	Brown, Gladys V. SS.	Ogden
Benson, Sergene SS.	Logan	Brown, Jennie SS.	Hyrum
Benson, Wesley T. c-So.	Logan	Brown, Keith a-J.	Grantsville
Bergeson, Audrey J. ed-So.	Cornish	Brown, Leora c-F.	Logan
Bergeson, Douglas A. a-J.	Cornish	Brunger, Earnest G. SS.	Mt. Pleasant
Bergeson, Rulon C. a-So.	Lewiston	Bryan, Bent R. e-F.	Nephi
Bergstrom, Ruby C. ed-F.	Tremonton	Bryan, Joe SS.	Chillocothe, Mo.
Berrells, Laura K. as-F.	Logan	Bryson, Ethel ed-F.	Providence
Berrett, Golden L. SS.	Murray	Buchanan, Odin c-So.	Logan
Berry, Josephine SS.	Logan	Budge, Clare T. as-So.	Logan
Beutler, Irene ed-F.	Logan	Budge, Omar S. as-F.	Logan
Bickmore, Afton ed-F.	Logan	Budge, T. Alvord as-F.	Logan
Bickmore, Lee Smith c-So.	Paradise	Budge, Vernon M. c-J.	Logan
Bickmore, Wm. Kenneth SS.	Brigham	Buffum, James T. SS.	Columbia, Mo.
Bindrup, Pearl SS.	River Heights	Buist, Annie SS.	Mendon
Bingham, Amos A. a-F.	Morgan	Bullen, Reed c-S-SS.	Logan
Bingham, Elwood a-F.	Burley, Ida.	Bullen, Sibyl c-So.	Richmond
Bingham, Golden H a-S.	Morgan	Bullock, Burt e-V.	Providence
Bird, Orlie ed-F.	Mendon	Bunker, S. Bertell a-F.	Provo
Bischoff, Gladys as-F.	Lovell, Wyo.	Bunker, Verna ho-J.	Provo
Bischoff, Robert Kenneth a-G.	Holliday	Burgoyne, Alma C. a-S.	Logan
Bischoff, Roscoe Alfred e-V.	Geneva	Burgoyne, Irvin c-S.	Logan
Bishop, Geo. E. as-So.	Garland	Burgoyne, Lucile SS.	Logan
Blackham, Strafford a-So.	Moroni	Burgoyne, Margaret c-J.	Logan
Blanch, Geo. T. a-J.	Ogden	Burke, Melvin a-G.	Honeyville
Blanchard, Archie H. as-F.	Logan	Burnham, A. Edna SS.	Brigham
Blanchard, C. H. SS.	Casper, Wyo.	Burnham, Clarence a-S.	Brigham
Blanchard, Raymond J. e-J.	Logan	Burnham, Lyman P. e-So.	Logan
Blanchard, Thomas, L. e-V.	Smithfield	Burnham, Weldon S. as-F.	Logan
Blaser, Herman E. a-F.	Logan	Burns, A. Ethelyn SS.	Logan
Blood, Nora L. as-S-SS.	Kaysville	Burris, Alden S. c-S.	Logan
Bohman, Hugo V. e-F.	Peterson	Burton, Beatrice H. SS.	Idaho Falls, Ida.
Bohne, E. F. SS.	Mt. Pleasant	Burton, Charles SS.	Idaho Falls, Ida.
Bonnemort, Howard J. as-F.	Kaysville	Busby, Wilma E. SS.	St. David, Ariz.
Booth, Mattie H. SS.	Cedar City	Buxton, Winona ho-F.	Logan
Boss, Anna SS.	Logan	Bybee, O. H. ed-J-SS.	Hooper
Bosworth, Wendell E. a-F.	Preston	Byington, Arvel e-V.	Logan
Boudrero, Blanche ed-J.	Logan	Byram, Verne O. c-So.	Logan

Calder, Daavid H. c-J	Vernal	Clark, Harold J. as-So-SS	Logan
Calder, Veera ho-S	Vernal	Clark, Ira a-So	Coalville
Calderwood, Blanche as-J-SS	Logan	Clark, Lealand a-S	Logan
Caldwell, J Pack as-F	Tooele	Clark, LeGrand SS	Coalville
Call, Joe (G. c-J	Brigham	Clark, Myral G. SS	Logan
Call, Maricie as-So	Brigham	Clark, Parley G. SS	Oakley, Ida.
Call, Maryy as-So	Brigham	Clark, Reuben SS	Coalville
Call, Rubyv T. (Mrs.) SS	Logan	Clarke, L. Floyd SS	Newton
Call, Voseco P. ed-S	Brigham	Clarke, Oswell G. a-F	Newton
Calton, Veclma ed-F	Salt Lake City	Clarke, Trevor SS	Newton
Campbell, Rulon SS	Logan	Cleveland, George W. a-So	Twin Falls, Ida.
Campbell, Theron as-S	Providence	Cliff, Edward a-F	Heber
Cannon, AAllen as-S	Fielding	Clitheroe, Lena SS	Mt. Pleasant
Cannon, AAngus W. a-F	Bountiful	Cole, Afton, ed-F	Logan
Cannon, HHyrum P. c-J	Logan	Coleman, Rhea SS	Midway
Cannon, MMary B. ho-S	Salt Lake City	Cottam, M. J. SS	Provo
Cannon, OOrson S. a-J	Bountiful	Connors, Elbert SS	Salt Lake City
Cannon, SSylvia as-F	Salt Lake City	Cook, David Wm. c-F	Logan
Capener, IEdna ed-So	Garland	Cook, Raydolph D. a-S	Layton
Capron, MMaybelle I. SS	Chicago, Ill.	Cook, S. Bryson, a-So	Logan
Cardon, Lucille as-So	Logan	Cooley, Chas. B. SS	Kaysville
Cardon, LWayne as-F	Logan	Cooley, LaVell SS	Logan
Carlisle, MMartha ed-So	Logan	Cooley, Marguerite ed-So	Logan
Carlson, DDwain E. c-F	Logan	Cordner, Stephen c-F	Provo
Carlson, FFred J. SS	Hyrum	Cordon, Theone c-a-F	Logan
Carlson, LLaRue c-J	Logan	Corlett, Vaughn ho-S	Provo
Carlston, COthell SS	Ephraim	Costley, Margaret SS	St. Anthony, Ida.
Carrigan, IPauline ed-So	Peterson	Couch, Ray J. e-V	Garland
Carroll, CCharles T. a-F	Provo	Cowan, Max L. a-F	Payson
Carter, FFrank as-F	Milford	Cowley, Jos. F. c-J	Logan
Case, Mrs.s. Helena B. SS	Ogden	Cox, Donald M. a-F	Manti
Cates, Maargaret SS	Milford	Cox, Emily ed-V	Huntington
Carver, Vesce R. SS	Wellsville	Cox, Veda SS	Manti
Cazier, FFrank Wm. c-So	Morgan	Cragun, Katie H. SS	Smithfield
Cazier, Neeva D. SS	Wells	Cragun, Oralie as-F	Smithfield
Chadaz, Fa'annie ed-F	Tremonton	Crandall, Roberta ho-F	Logan
Chadaz, MMary ed-So	Tremonton	Cranney, Monroe SS	Logan
Chambers, s, Donald G. as-F	Garland	Cranney, Rita as-S	Logan
Chandler, Wilbur J. c-F	Salt Lake City	Cranney, Russell G. c-F	Logan
Chappell, L LaVon SS	Lyman, Wyo.	Cranney, Ruth as-J	Logan
Cheney, GGretta ed-J	Laketown	Critchlow, Frances E. SS	Hyrum
Childs, Floreence SS	Springville	Crockett, Darrell W. as-F	Logan
Childs, Mytyron D. a-J	Springville	Crockett, Kenneth as-F	Logan
Chipman, L Ruth SS	American Fork	Crockett, Mildred, c-F	Logan
Choules, CGeorge. SS	Logan	Crook, Daniel a-F	Heber
Christensen, A. Lee a-G	Salt Lake City	Crook, Grace ho-S	Heber
Christensen, Dorothea ho-So	Elwood	Crook, James E. c-F	Heber
Christensen, Eileen SS	Elsinore	Crook, Royal D. a-S	Heber
Christensen, Erma SS	Richfield	Crookston, R. Burns ed-S	Logan
Christensen, Frances M. ho-J	Mt. Pleasant	Cruikshank, Donald B. c-J	Logan
Christensen, Genevieve C. c-F	Shelley, Ida.	Cummings, Leona c-J	Brigham
Christensen, Henry Os. as-G	Rexburg, Ida.	Dahle, Robert a-S	Logan
Christensen, Ivan as-S	Ephraim	Daines, Homer G. SS	Providence
Christensen, John as-So	Wellsville	Daines, L. Delar as-F	Logan
Christensen, Leon N. a-So	Brigham	Daines, Lois ed-F	Logan
Christensen, Lorraine H. SS	Shelley, Ida.	Daines, Lydia M. as-F	Logan
Christensen, Nyles c-So	Redmund	Daines, Robert H. as-S	Logan
Christiansen, Camille ho-S	Logan	Daines, Wanda ho-J-SS	Logan
Christianssen, Katherine ho-S	Logan	Dalley, Charles L. a-F	Summit
Christianssen, Merle C. ed-F	Idapah	Dalley, Milo H. as-F	Driggs, Ida.
Christianssen, Milton a. c-J	Mayfield	Daniels, Cleon Price as-G	Logan
Christopherson, John W. c-So	Salt Lake City	Daniels, S. K. SS	Mt. Emmons
Chugg, GGrant E. c-F	Providence	Darley, Byron c-S	Logan
Clark, Bertha as-F-SS	Logan	Darley, Leon J. c-So	Logan
Clark, Cyvyrus L. as-G	Brigham	Davis, Mrs. C. V. SS	Ruth, Nev.
Clark, Glenn C. c-J	Logan	Davis, Carl G. a-J	Vernal
Clark, Gwynn R. as-G	Logan	Davis, Chester V. SS	Ruth, Nev.

Davis, Donna as-F	Lehi	Fife, Austin E. as-F	Logan
Davis, Eva SS	Provo	Fife, Coy ho-S	Providence
Davis, H. Floyd c-J	Logan	Fife, Karl as-S	Logan
Davis, Hugh C. SS	Garland	Fife, Lorin C. as-G	Logan
Davis, Iona as-So	Salt Lake City	Fife, Lucile ed-So	Logan
Davis, James E. a-S	Garland	Fillmore, A. James as-F	Richfield
Davis, Lloyd N. a-S	Brigham	Fillmore, Parker P. a-F	Richfield
Davis, M. Fred e-V	Garland	Fishe, Lucretia as-J	Logan
Davis, Ruth ho-J	Brigham	Fisher, A. H. SS	Fillmore
Day, Arvilla ho-S	Parowan	Fjelsted, Fred J. SS	Ephriam
Day, Geneva SS	Draper	Flamm, George Ronald as-So	Logan
Day, Joseph F. a-J	Draper	Fletcher, Irene T. SS	Logan
Dean, H. A. SS	Rexburg, Ida.	Fletcher, Sara ed-F	Logan
Decker, John F. a-J	Logan	Flint, Maurine ho-F	Layton
Deschner, Fred. as-F	Mt. Pleasant	Flowers, Lucile SS	Salt Lake City
Despain, Owen M. a-F	Venice	Forelberg, Thelma as-S-SS	Logan
Dibble, J. Rex as-F	Logan	Folkman, Serena ed-So	Logan
Dickson, Warren e-F	Woodruff	Foltz, Imogene J. SS	Topeka, Kansas
Dittmore, Marlin L. c-So	Pleasant Grove	Fonnesbeck, Alice as-J	Logan
Dixon, Fred W. SS	Provo	Fonnesbeck, Herman S. e-F	Logan
Domgaard, Mignon ed-So	Glenwood	Fonnesbeck, Maya M. as-F	Logan
Doney, Alforda ho-F	Logan	Forbes, Vernal B. e-F	Uron, Ida.
Doty, Ruth SS	Richmond	Ford, Dale W. e-F	Farmington
Dowdle, Verda E. as-S	Newton	Forrester, Robert A. as-S	Richmond
Driggs, Keith as-F	Garland	Fowler, Heber C. e-S	Rexburg, Ida.
Dudley, Howard J. a-F	Jensen	Fowler, Lorin D. as-S	Logan
Dudley, Myrtle ed-J	Jensen	Frampton, Earl P. e-F	Logan
Duke, Virginia SS	Idaho Falls, Ida.	Francis, Carma ho-J	Morgan
Dunkley, Margaret as-So	Richmond	Frandsen, Kenneth S. as-F	Salt Lake City
Dunn, Charles c-J	Logan	Frandsen, Waldo R. a-J	Price
Dunn, Joe H. e-V	Tremonton	Franke, Gerhard as-V	Logan
Dunn, Simeon A. SS	Hyrum	Frazier, Glenn a-F	Woodruff
Eagar, Blanch H. SS	Mammoth	Frederick, Hilda ho-S	Logan
Eagar, David SS	Mammoth	Fredrickson, Earl A. c-A	Avon
Eagar, Martha C. SS	Nephi	Freed, Jasmine, Y. SS	Salt Lake City
Eames, David I. a-S	Logan	Freestone, Beulah, ed-So	Vernal
Eames, Melba ed-So	Logan	Frost, Irving C. e-S	Coalville
Eck, Mamie C. ed-F	Cedar	Frost, George T. a-F	Cowley, Wyo.
Edwards, Erma ed-F	Logan	Froyd, Maxine E. ho-J	Cedar
Edwards, Leah C. as-S	Logan	Fuhrman, Ione ho-F	Providence
Edwards, Leroy e-V	Logan	Fuller, Varden c-F	Smithfield
Egbert, S. R. SS	Logan	Fullmer, Rex C. ed-J	Circleville
Elder, C. Evelyn SS	Salt Lake City	Fulmer, George F. a-V	Magna
Eliason, Farris M. as-S	Logan	Funk, Edith as-F	Richmond
Eliason, Newel G. as-J	Logan	Furr, Carl J. as-G	Salt Lake City
Ellis, Martell a-So	Pleasant Grove	Gaddie, Hunter e-So	Garland
Ellwood, Geo. H. SS	Paris, Ida.	Gagon, Walter T. e-F	Soda Springs, Ida.
England, David Wm. as-J	Logan	Gardner, Alma H. e-J	Logan
Ensign, Ivie J. SS	Salt Lake City	Gardner, Eldon J. as-F	Logan
Ensign, Leila R. ed-F	Logan	Gardner, Harold K. a-F	Venice
Ensign, Olive as-J	Salt Lake City	Gardner, LuRee S. ho-S	Cedar
Erickson, Esther as-J	Logan	Garfield, Glen C. ed-F	Tremonton
Esplin, Alma C. SS	Logan	Garrett, Wanda as-S	Nephi
Evans, Daisy M. SS	Malad, Ida.	Garner, Carmen ed-F	Logan
Evans, David a-F	Lehi	Garner, Rosabelle ho-J	Ogden
Evans, Edythe L. SS	Malad	Gattlieb, Mrs. E. A. SS	Logan
Evans, James a-G	Malad	Gearv, Charles C. as-So	Morgan
Evans, Peter C. e-S	Garland	Geddes, Faung SS	Preston
Facer, Ray T. e-V	Brigham	Geddes, Lenald SS	Logan
Farrar, Elmer W. a-J	Sandy	Geddes, W. S. SS	Logan
Farrar, Ralph SS	Sandy	Geddes, Willard c-S	Logan
Fausett, Adelbert a-J	Price	Gerber, Amos K. e-F	Logan
Faust, Mildred E. SS	Syracuse, N. Y.	Germer, Kenneth e-So	Deweyville
Faylor, S. Orpha as-J	Logan	Gessel, Veda c-So	Logan
Felsted, Harold N. e-F	Logan	Gibbons, Lathel ho-F	Garden City
Ferguson, Earl SS	Brigham	Gibbons, Lydia ho-S-SS	Garden City
Ferguson, Leo as-F	Echo	Gibson, Ellen G. ho-F	Nephi

Gibson, Owen N. as-S	Nephi	Hansen, Allen a-F	Richfield
Gilbert, Clyde E. SS	Columbia, Mo.	Hansen, Alta M. ed-So	Richfield
Gillispie, Daniel H. as-So	Tooele	Hansen, Bessie M. ho-S-SS	Logan
Gillispie, Kenneth S. as-F	Tooele	Hansen, Donald M. as-V	Santaquin
Glenn, Alwilda M. ho-F	Logan	Hansen, Eldon J. as-J	Logan
Glenn, Marie E. SS	Ogden	Hansen, Franklin C. a-F	Boulder
Godfrey, Agnes SS	Clarkston	Hansen, Geraldine A. c-So	Jackson, Wyo.
Goodwill, Donald SS	Shreveport, La.	Hansen, Gertrude ed-F	Santaquin
Gordon, Coral as-G-SS	Smithfield	Hansen, Gwendolyn as-S	Providence
Gordon, Sam H. a-So	Smithfield	Hansen, Harold L. c-So	Logan
Gourley, Roland M. ed-So	Logan	Hansen, Helen R. c-So	Logan
Grace, Paul E. c-F	Nephi	Hansen, J. Deloy a-J	Richfield
Graff, Clara SS	Santa Clara	Hansen, Lorenzo F. e-F	Logan
Granger, Hellen G. ed-F	Tremonton	Hansen, Marguerite ho-J-SS	Salt Lake City
Grant, Howard E. SS	Pine, Nev.	Hansen, Mitchell c-So	Tremonton
Greaves, Cyrus W. c-S	Preston, Ida.	Hansen, Myron T. a-G	Collinston
Greaves, Donald K. a-F	Logan	Hansen, Ora ed-So	Garland
Greaves, Ethelyn O. as-G	Logan	Hansen, Othello T. as-G	Collinston
Greaves, Florence D. as-G-SS	Logan	Hansen, Opal H. SS	Logan
Greaves, J. Dudley as-G	Logan	Hansen, Roma ho-So	Brigham
Greaves, Ora G. as-So	Logan	Hansen, Sidney a-F	Newton
Greene, Laura C. as-F	Logan	Hansen, Wilford L. a-J	Richfield
Green, Gladys as-So	Lethbridge, Can.	Hansen, Wilma Anetta ed-F	Monroe
Greenhalgh, Alma E. SS	Logan	Hansen, Mae ed-So	Cornish
Gregory, Robert G. e-J	Logan	Hanson, Mark B. a-F	Spanish Fork
Griffeth, Melvin T. a-So	Logan	Harding, Margaret as-S	Logan
Griffin, Charles M. c-G	Logan	Harding, Ralph SS	Malad, Ida.
Griffin, Herbert T. as-J	Ogden	Hardy, Leon D. c-G	Logan
Griffin, Marcus J. as-F	Newton	Hardy, McVal c-F	Logan
Griffin, Mina ho-J	Newton	Haroldsen, Eva ho-S	Logan
Griswold, Sylvia M. SS	Harvard, Mich.	Harris, Albert e-So	Richmond
Gudmundson, Clair M. as-So	Springville	Harris, Curtis H. c-F	Price
Guidinger, Norris L. c-F	Logan	Harris, Evan as-G	Logan
Gum, Ben SS	Springfield, Mo.	Harris, Joseph Wm. as-F	Richmond
Gundersen, Arden B. a-So	Salt Lake City	Harris, Linden E. a-J	Logan
Gunnell, Elsie H. SS	Wellsville	Harris, Odell J. a-F	Pleasant Grove
Gunnell, Francis H. as-J	Wellsville	Harston, Fay ho-J	Logan
Gunnell, Merrill H. as-J	Wellsville	Hart, Adina as-F	Logan
Gunnell, Waldon as-So	Wellsville	Hart, Belva SS	Preston
Gunnell, Winston, R. as-F	Wellsville	Hart, Cerelda c-F	Logan
Guymon, Evert Lee a-S	Huntington	Hart, Flora ed-So	Bloomington, Ida.
Gyllenskog, Grant e-F	Smithfield	Hart, Reed L. ed-F	Logan
Hacking, Grant L. a-F	Vernal	Hart, Ruth as-S	Bloomington, Ida.
Haddock, J. L. SS	Bloomington, Ida.	Hart, Marcus Fielding as-F	Logan
Hadfield, Robert W. c-F	Salt Lake City	Hartman, Floid Chester e-F	Mt. Emmons
Hadly, Verda SS	Logan	Hartvigsen, Alice as-F	Hyrum
Haggerty, Berneice ho-J	Cokeville, Wyo.	Hartvigsen, Milton F. as-J	Hyrum
Haggerty, Geraldine P. ed-F	Cokeville, Wyo.	Harvey, Ray B. e-F	Kaysville
Haight, David SS	Salt Lake City	Haslam, Geo. S. c-S	Logan
Hale, John M. as-So	Logan	Haslam, Greta c-F	Logan
Hale, Leah SS	Smithfield	Haslem, Niles R. a-F	Roosevelt
Hale, Rosaline as-So	Logan	Hassell, Jessie A. SS	Mammoth
Hales, Elsie SS	Beaver	Hatch, Lorenzo H. c-G	Salt Lake City
Hall, Walter C. SS	Salt Lake City	Hatch, Thora L. SS	Logan
Halland, Wanda SS	Brigham	Hatch, Wm. Ray a-F	Idaho Falls, Ida.
Halverson, Edith SS	Ogden	Haun, Virginia SS	Midvale
Halvorsen, Leon L. c-J	Logan	Hawkes, E. Earl c-J	Logan
Hamilton, Esther R. SS	Sugar City, Ida.	Hawkes, Frank J. c-So	Logan
Hammerly, Fred as-G	Monticello, Wiso.	Hawkes, Irving c-S	Logan
Hammond, Datus M. c-F	Providence	Hawkes, Gordon e-F	Logan
Hammond, Dean B. c-F	Providence	Hawkes, Leo R. as-F	Tooele
Hammond, Marjorie ed-So	Providence	Hawkes, Stanton M. a-So	Tooele
Hammond, W. W. as-S	Providence	Hawkins, Clarence J. as-F	Salt Lake City
Handy, Beth ho-F	Logan	Hawkins, Mabel SS	Logan
Hanks, Ellen R. ho-S	Tooele	Hawkins, Percy B. c-So	Logan
Hansen, A. M. c-S-SS	Brigham	Hawley, James W. e-G	Logan
		Haworth, Horace N. e-F	Logan

Haworth, James Henry as-F	Logan	Hubbard, Eugene M. as-F	Willard
Hayes, Margaret as-J	Pleasant Grove	Huffaker, Lynn S. a-F	Woodruff
Hayes, Spencer W. e-F	Pleasant Grove	Huffaker, Myrtle as-F	Logan
Hayward, Josef C. as-So	Logan	Hughes, Durrell c-J	Mendon
Hayward, Lynn SS	Paris, Ida.	Hughes, Laura ed-F	Mendon
Hayward, Wm. Budge c-S-SS	Logan	Hull, Emma ho-F	Logan
Heaps, Vella SS	Smithfield	Hull, Robert M. as-F	Logan
Heep, Inez ho-F	Logan	Hulme, Joseph A. as-F	Logan
Heese, Mary M. as-J	Logan	Hulme, Claire as-So	Logan
Heinrich, Mildred L. ed-So	Smithfield	Hulme, Helen as-J	Logan
Henderson, Geo. R. a-S	Joseph	Humpherys, L. S. e-V	Logan
Henderson, Howard W. as-F	Logan	Humpherys, L. R. SS	Logan
Henderson, May SS	Logan	Hunsaker, H. B. ed-J	Honeyville
Henderson, Wanda as-F	Logan	Hunsaker, Lloyd R. a-F	Tremonton
Henderson, Willa ed-J	Logan	Hunsaker, Milton L. ed-So	Honeyville
Hendricks, Virginia ed-So	Richmond	Hunsaker, Rexel F. e-F	Logan
Hendrickson, Virginia as-F	Idaho Falls, Ida.	Hunsaker, W. Eldon ed-So	Honeyville
Heninger, Gene c-F	Logan	Hunter, Genevieve SS	Lewisville, Ida.
Henrie, Bernard, D. c-F	Panguitch	Hussey, Marion I. ho-F	Ogden
Henrie, Duwayne a-So	Panguitch	Hunter, Alfred c-J	Logan
Henrie, Emma ed-V	Panguitch	Hunter, Helma SS	Orland, Calif.
Henrie, Duncan W. c-G	Thatcher, Ida.	Hunter, Webster B. c-So	Trenton
Henrie, Leone C. ho-G-SS	Thatcher, Ida.	Hutchinson, Jesse as-S	Logan
Henrie, Wayne SS	Logan	Hutchings, Selar S. a-G	Logan
Herbert, H. L. SS	Malad, Ida.	Hyde, Helen R. ed-J	Kaysville
Herbert, Harry L. a-J	Ogden	Irisarri, Antonio SS	Columbia, S. A.
Heslington, Melbourne SS	Adamsville	Irving, Valois SS	Midvale
Hess, Alvin ed-G	Logan	Israelsen, Alice ho-J	Hyrum
Hickman, Iola as-F	Bicknell	Israelsen, Lettie ho-So	Logan
Hickman, Kyrnel L. c-F	Logan	Israelsen, Vernon c-G-SS	Logan
Higgins, Kenneth E. a-F	Logan	Ivie, Elna SS	Salt Lake City
Higginson, Mary SS	Spanish Fork	Jackson, Esther as-F	Logan
Hildt, Leona c-F	Garden City	Jackson, F. Leslie as-So	Tooele
Hill, Archie K. as-F	Logan	Jacobs, James a-J	Mt. Pleasant
Hill, Mary C. SS	Smoot, Wyo.	Jacobs, Owen S. as-F	Magna
Hill, Frances L. SS	Grand Junction, Colo.	Jadot, Renee M. as-J	Kemmerer, Wyo.
Hill, Gladys K. SS	Wellsville	Jamieson, Joseph L. SS	Ferron
Hill, Mary as-F	Logan	Jameson, Parley L. ed-F	LaSal
Hill, Rita K. ho-S	Logan	Janes, Melvin as-So	Providence
Hillstrom, Mae ed-So	Brigham	Janes, Ray L. as-F	Providence
Hinckley, Ellen R. SS	Brigham	Jeffs, Newell R. as-F	Logan
Hinckley, Mary ed-So	Brigham	Jenkins, Archie L. SS	Newton
Hirschi, Hyrum H. e-V	Geneva, Ida.	Jenkins, Ed. W. c-F	Salt Lake City
Hirst, Hazel ho-So	Logan	Jenkins, Eva ho-S-SS	Logan
Hirst, C. Merlin c-G	Logan	Jenkins, Hyrum SS	Eureka
Hobbs, Gladys M. as-So	Logan	Jenkins, J. D. as-F	Logan
Hodges, Evelyn C. as-S	Logan	Jenkins, Lawrence W. c-J	Ogden
Hodges, L. E. SS	Logan	Jenkins, Norma as-F	Logan
Hodgson, Fred B. a-F	Logan	Jenkins, Oriel ed-So	Newton
Hoffler, Phyllis L. ed-F	Logan	Jenkins, Wm. H. as-F	Logan
Hoffman, Cliff as-F	Logan	Jennings, Lydia ho-So	Logan
Hogan, Arminta as-So	Lewiston	Jennings, Robert as-F	Logan
Hogan, Muriel B. ed-So	Lewiston	Jensen, Achton C. as-F	Smithfield
Hogenson, Helen SS	Logan	Jenson, Dewane a-S	Hyrum
Holley, Harold, a-F	Springville	Jensen, Edmond C. ed-J	Redmond
Hohman, Grant A. c-F	Logan	Jensen, Edmond J. as-So	Logan
Holmgren, DeEsta SS	Tremonton	Jensen, Elsie SS	Salt Lake City
Holmgren, Ethel ho-S-SS	Tremonton	Jensen, Gerald a-F	Logan
Holmgren, Wayne as-F	Tremonton	Jensen, Grace A. ed-J	Logan
Horsley, Ernest M. a-J	Brigham	Jensen, Irwin SS	Paris, Ida.
Horsley, Helen as-F	Brigham	Jensen, Laura C. e-J	Preston
Hoshaw, Edward M. SS	Caldwell, Ida.	Jensen, Lillian SS	Mendon
Howell, Fannie F. SS	Tucson, Ariz.	Jensen, Lucille L. ed-F	Mantua
Howell, Fern S. a-So	Logan	Jensen, Ludella ed-So	Smithfield
Howell, Leroy S. a-F	Logan	Jensen, Norma J. c-S	Mantua
Hoyt, Elmo R. a-F	Marion	Jensen, Stanton P. c-F	Murray
Hoyt, Norman e-F	Kamas	Jensen, Velda c-F	Providence

Jeppson, Dallas E. a-F	Logan	Kennard, Gordon Keith c-J-SS	Logan
Jeppson, Elmer as-S	Mantua	Kennard, John G. SS	Logan
Jeppson, Robert B. SS	Carson, Nev.	Kennedy, George A. a-V	Marysville
Jeppson, Wanda ed-F	Mantua	Kent, Joy ed-F	Lewiston
Jessop, Beatrice as-S-SS	Logan	Keppler, Karl SS	Elko, Nev.
Jessop, Howard ed-So	Logan	Kerr, Louise as-J	Logan
Johnson, Annie c-F	Logan	Kidd, Garland H. e-V	Logan
Johnson, Charles R. as-J-SS	Logan	Kihara, Cisco SS	Pocatello, Ida.
Johnson, Dallas as-S	Logan	Kilburn, Albert G. a-S-SS	Morgan
Johnson, Dean V. a-F	Pleasant Grove	Killam, Mildred ed-F	Milford
Johnson, DeVerl c-So	Logan	Killburn, Hyrum P. as-J	Morgan
Johnson, Eva SS	Logan	Kimball, Albert P. as-J	Logan
Johnson, Fern ed-So	Mendon	Kimball, Edwin R. SS	Draper
Johnson, Irva as-F	Logan	King, Mildred ed-So	No. Logan
Johnson, J. Arthur SS	Brigham	King, Mrs. Marion SS	Manti
Johnson, John T. SS	Maryville, Tenn.	King, Venetta SS	No. Logan
Johnson, John R. SS	Logan	King, Emma J. SS	Kamas
Johnson, LeGrand e-V	Newton	Kirby, Harold J. SS	Hyde Park
Johnson, Leo F. ed-So	Laketown	Knight, Lester P. a-J	Ogden
Johnson, Lucile ho-S	Logan	Knowles, W. B. SS	Martinez, Calif.
Johnson, Lund A. c-S	Logan	Knudson, Clarence SS	Provo
Johnson, Melba SS	Collinston	Knudson, Lilly SS	Brigham
Johnson, Milton G. as-F	Lewiston	Koester, Edward SS	Wichita, Kan.
Johnson, Myrtle c-F	Preston, Ida.	Kofoed, Bernice S. ed-F	Logan
Johnson, Milton L. as-F	Logan	Koford, Glen as-So	Brigham
Johnson, Parnell e-F	Laketown	Koford, Harold A. c-So	Logan
Johnson, Pearl ho-F	Hyrum	Kolts, Edward H. e-So	Eureka
Johnson, Reha ho-So-SS	Pleasant Grove	Korth, Ethel ed-So	Garland
Johnson, Thelma ho-So	Richmond	Kotter, Elmer c-F	Brigham
Johnson, Vera SS	Manti	Kotter, Melba SS	Elsinore
Johnson, Virginia as-So	Laketown	Kotter, Virginia c-So	Brigham
Johnson, Willard S. a-F	East Garland	Kreasean, Roy as-V	Bingham
Johnson, Wm. Owen c-J	Santaquin	Kropfli, Edward S. e-F	No. Logan
Jones, Allen c-F	Heber	Kunz, Zina as-So	Logan
Jones, Clarence e-F	Ogden	Laird, Lyndon a-F	Dubois, Ida.
Jones, E. Ronald as-So	Logan	Lallatin, Mark M. c-F	Soda Springs, Ida.
Jones, Ferris H. c-So	Wellsville	Lamb, D. M. SS	Hyde Park
Jones, G. Allen SS	Coalville	Lamm, Marjorie M. as-S	Logan
Jones, Marguerite E. SS	Green River	Larsen, Arta J. ho-S	Newton
Jones, May SS	Wellsville	Larsen, Dorothy B. ho-J	Mt. Pleasant
Jones, Orlene as-F	Malad	Larsen, Grant c-S	Newton
Jones, R. V. SS	Twin Falls, Ida.	Larsen, Jaunita M. as-F	Logan
Jones, Thora a-F	Salt Lake City	Larsen, Marsden L. a-F	Ogden
Jorgensen, Blix a-F	Salina	Larsen, Paul B. c-J	Logan
Jorgensen, Melvin N. as-J	Leota	Larson, Arvid J. SS	Sandy
Judah, George A. as-J	Logan	Larson, Dora ed-S	Logan
Judah, Mamie as-F	Logan	Larson, Earl e-So	Oakley, Ida.
Judd, B. Ira SS	Logan	Larson, Erma SS	Mayfield
Judd, Mrs. Beatrice W. SS	St. David, Ariz.	Larson, Everett K. c-F	Logan
Judkins, Leonard N. as-S	North Ogden	Larson, Frank Wm. a-F	Logan
Julander, Odell a-So	Monroe	Larson, George as-S	Mayfield
Karren, Lula ed-So	Vernal	Larson, June SS	Logan
Kearns, Mary E. as-F	Logan	Larson, LaDell a-F	Logan
Kearnsley, Lorin P. as-F	Logan	Larson, Margaret c-F	Logan
Keatch, Russell R. a-S	Pleasant Grove	Larson, Olga SS	Smithfield
Keller, Delilah D. ho-So	Logan	Larson, Phyllis SS	Elsinore
Keller, IvaLou ed-F	Logan	Larson, Preston as-F	Logan
Keller, Leslie F. ed-F	Minkcreek, Ida.	Larson, Raymond P. ed-So	Mayfield
Keller, Tennie J. ed-So	Logan	Larson, Sterling C. as-J	Richmond
Keller, Wesley a-G	Logan	Larson, Vaud E. e-J	Santaquin
Kellett, Elsie SS	Moroni	Larson, Verdan D. a-So	Raymond, Canada
Kellett, O. L. SS	Moroni	Larson, Vernon as-S	Smithfield
Kellett, Rex as-So	Moroni	Larson, Waine a-F	Garland
Kellett, Sarah SS	Moroni	Latta, Alice L. SS	Pullman, Wash.
Kelly, Ross A. c-F	Brigham	Lau, Richard as-F	Soda Springs, Ida.
Kemp, Harry H. as-So	North Logan	Lauritzen, Arden c-So	Gooding, Ida.
Kendall, Lula ed-So	Logan	Lauritzen, Cyril W. as-J	Moroni

Law, Ethel M. SS.	Salina	Manning, Nephi a-F	Ogden
Lawrence, George A. e-So.	Logan	Manning, Viola ho-F	Burley, Ida.
Lawrence, Harold W. SS.	Malad, Ida.	Marble, Arthur as-J.	Brigham
Layton, Arthur F. c-S-G	Kaysville	Marble, Vadis ed-So.	Deweyville
Layton, Elizabeth S. ho-J	Layton	Marmon, Robert L. Jr. SS.	Whiterocks
Layton, Harold H. SS.	Ogden	Marsh, Dorothy A. ed-F	Ogden
Layton, Myron M. c-J	Kaysville	Marsh, Gweneth ed-So.	Ogden
Leatham, Ruby, ho-S.	Wellsville	Martin, Vera as-F	Jackson, Wyo.
Leavitt, Aura SS.	Bunkerville Nev.	Martineau, George A. c-S	Logan
Leavitt, Nina c-F	Lewiston	Martineau, Jess as-F	Logan
Lee, Charles Oren SS.	W. Lafayette, Ind.	Mason, Herschel E. as-J	Logan
Lee, Clyde L. c-So	Tooele	Mason, Ivie Rae as-J	Willard
Lehner, Virginia W. c-V	Logan	Mason, Marjorie, M. SS	Garland
Leishman, Seth P. a-F	Wellsville	Mathews, Conan E. as-So-SS	Providence
Leimmon, Ella M. SS	Rigby, Ida.	Mathias, Melvin M. c-J	Brigham
Lenkersdorfer, Clara ho-J	Logan	Mattson, Jessie V. as-F	Laketown
Lenkersdorfer, Leilah SS.	Logan	Mattson, Mary M. as-J-SS	Salina
Lenkersdorfer, Pernecy ho-S	Logan	Mattson, Ruth M. as-F-SS	Salina
Leonard, Eugene O. a-G	Pocatello, Ida.	Maughan, Carlyle c-J	Wellsville
Liddle, Clarice a-So.	Logan	Maughan, Cyril P. a-So.	Wellsville
Liddle, Wallace J. e-G	Logan	Maughan, Ernest SS.	Wellsville
Lillywhite, Alden e-G-SS	Brigham	Maughan, Frank B. as-S	Wellsville
Lillywhite, Harold S. a-F	Brigham	Maughan, Ida ed-F	Smithfield
Lillywhite, Jasper R. as-F	Brigham	Maughan, I. Virginia as-J-SS	Logan
Liljenquist, Thelma SS.	Hyrum	Maughan, Katherine ed-F	Smithfield
Limb, Myrle ed-So.	Garland	Maughan, Ruth SS.	Logan
Lindsay, Elizabeth M. SS.	Liberty	Maughan, Sarah ho-S	Logan
Lindquist, Kenneth O. c-J	Logan	McAlister, Dean F. a-So.	Logan
Lindquist, Norene ed-So.	Ogden	McAlister, Dorothy ed-So.	Logan
Linebaugh, Glade C. a-F	Pleasant Grove	McAlister, Ella Mae c-So.	Logan
Linford, Henry B. as-So	Logan	McAlister, Helene C. as-S	Logan
Linford, Howard SS.	Kaysville	McAlister, J. W. SS.	St. George
Linford, Jas. W. c-S-SS	Logan	McAlister, Sara SS.	Logan
Linford, Leo Hulme as-S-SS	Logan	McBeth, Ned as-So.	Payson
Linford, Zilla ho-S	Logan	McCarrey, Lucille ed-So.	Richmond
Linzey, Kenneth S. e-F	Anaconda, Mont.	McCarrey, Robert E. e-V	Logan
List, Frank a-F	Logan	McClellan, Maude ho-S-SS.	Logan
Little, Elbert L. Jr. SS.	Muskogee, Okla.	McClure, Clarence SS.	Caldwell, Ida.
Littledike, E. Clyde c-F	Smithfield	McEntire, Weldon D. as-F	Ogden
Littlefield, Ray A. a-S	Tropic	McGee, Perle SS.	Okolona, Miss.
Littlefield, Versa J. ho-S-SS	Logan	McGrath, Cecilia SS.	Boise, Ida.
Lloyd, Erma as-J	Logan	McHugh, Olivia as-F	Salt Lake City
Lloyd, Lewis, H. c-J	Logan	McIntosh, Kimball D. SS.	Provo
Long, R. Wendell as-F	Logan	McMullin, T. H. SS.	Bingham
Loosle, J. K. a-So.	Clarkston	McMurdie, Mary SS.	Logan
Losee, George B. as-F	Brigham	McNeil, Millie as-So.	Logan
Loveless, Florence ho-S-SS	Logan	McQuarrie, Harlow B. a-F	Salt Lake City
Lowe, Reva ed-F	Logan	McNerney, John W. SS.	Carthage, Mo.
Lowe, Mrs. Sadie H. SS.	Driggs, Ida.	McPherson, Richard J. SS	Columbia, Mo.
Lund, Ethel SS.	Mt. Pleasant	Meadow, Elwood G. c-V	Logan
Lunn, Richard S. SS.	Chicago, Ill.	Memmott, Clifton N. SS.	Scipio
Lunt, Lois ed-So.	Nephi	Merrill, Anna S. as-So.	Richmond
Lyman, LaMar as-J	Parowan	Merrill, Ardella ho-F	Richmond
MacArthur, J. Wesley c-J	Logan	Merrill, Clinton a-F	Logan
Macdonald, Owen G. c-F	Ogden	Merrill, Foster C. as-J	Richmond
Mack, Robert H. e-V	Ogden	Merrill, Jane as-F	Logan
Madsen, Anne SS.	Logan	Merrill, Jean as-J	Logan
Maddock Joseph H. c-V	Mackay, Ida.	Merrill, Marriner H. c-S	Richmond
Madsen, Bertrude ed-So	Manti	Merrill, Marriner W. as-So.	Logan
Madsen, Boyd W. a-F	Mt. Pleasant	Mifflin, DeVota ed-F	Ogden
Madsen, Edna ho-G	Manti	Miller, Horace c-S	Panguitch
Madsen, Johannah ho-So.	Price	Miller, LaRue a-F	Venice
Madsen, Louis L. a-J	Salt Lake City	Miller, Orrin P. as-So.	Tooele
Madsen, Richard A. c-So.	Honeyville	Milligan, Cleve H. e-So.	Smithfield
Madsen, Royal A. a-F	Mt. Pleasant	Million, Mrs. E. E. SS.	Muskogee, Okla.
Malmgren, Edwin L. c-So.	Centerfield	Mills, Harris B. a-F	Park City
Manning, Dorothy, SS.	Ogden	Mitchell, Kathryn as-F	Logan

Mitton, Ruby as-So. Logan
 Monson, Franklin D. e-So. Logan
 Monson, Harold c-F-SS. Logan
 Monson, June as-J. St. Charles, Ida.
 Monson, Margaret, as-F. Richmond
 Monson, Wilford R. a-S. Hyrum
 Montierth, Lucille SS. Safford, Ariz.
 Montgomery, Althera G. ed-So. No. Ogden
 Montgomery, Veone N. ed-So. No. Ogden
 Morley, James M. e-F. Coalville
 Morgan, Dorothy ed-F. Salt Lake City
 Morgan, George, C. a-J. Logan
 Morrell, Lillian ho-S. Hyde Park
 Morrell, Wanda c-F. Logan
 Morrell, William E. as-So. Logan
 Morris, R. A. Jr. SS. Logan
 Morrison, DeOn H. ed-F. Monroe
 Morrison, Lucy ed-So. Preston
 Mortensen, Pearl ed-So. Tremonton
 Mortimer, Wm. E. SS. Provo
 Mortimer, W. J. SS. Provo
 Morton, Jack C. ed-S. Logan
 Morton, Thomas W. as-F. Logan
 Meier, Emeline R. SS. Evanston, Wyo.
 Muir, Maida as-S. Mendon
 Murdock, Grant as-F. Greenville
 Murdock, Lovell c-F. Heber
 Murdock, Neil as-J. Heber
 Murdock, Wayne T. as-So. Heber
 Murphey, Caroline ho-G-SS. Austin, Nev.
 Murphy, Dorothy as-F. Eureka
 Murray, Evan B. ed-G SS. Wellsville
 Murray, Fred L. a-F. Springville
 Myers, Ambros. Panguitch
 Myers, Helen SS. Salt Lake City
 Myers, Levi ed-So. Panguitch
 Napper, Don L. c-F. Smithfield
 Nash, Uless a-F. Logan
 Navarre, Alfred T. SS. Hannover, Ind.
 Neal, James H. SS. Boise, Ida.
 Neal, Jennie C. ed-J-SS. Ogden
 Neal, John C. SS. Ogden
 Neeley, Deta P. SS. Logan
 Neeley, N. Glen SS. Logan
 Neilson, George D. c-G. Logan
 Neilson, Rulon K. c-So. Logan
 Nelson, Alfred N. a-J. Richmond
 Nelson, Ann S. as-J. Logan
 Nelson, Bernard e-J. Richmond
 Nelson, Don G. as-F. Logan
 Nelson, Ernest L. as-J. Brigham
 Nelson, Geneve C. SS. Franklin, Ida.
 Nelson, Jess G. as-J. Logan
 Nelson, Laura H. as-F. Logan
 Nelson, Milton E. as-J. Brigham
 Nelson, O. E. SS. Logan
 Nelson, Rebecca as-S. Arimo, Ida.
 Nelson, Rebecca A. SS. Logan
 Nelson, Richard J. SS. Okmulgee, Okla.
 Nelson, Stanley C. SS. Ferron
 Nelson, W. R. SS. Heber
 Nelson, Wilmar J. e-S. Logan
 Nelson, Z. Mae SS. Preston, Ida.
 Neuberger, L. Mark c-F. Logan
 Nielson, Clayton SS. Lewiston
 Nielson, Cleo ed-So. Logan

Nielson, Emma ed-J. Hyrum
 Nielson, Ethel E. c-F. River Heights
 Nielson, Glenn G. as-F. Logan
 Nielson, Lillie V. SS. Logan
 Nielson, Ottis A. as-So. Logan
 Nielson, Ruby V. ed-So. Logan
 Niles, Susie S. SS. Salt Lake City
 Nishimoto, Earl S. as-J. Logan
 Noel, Floyd C. a-F. Vernal
 North, Vera A. SS. Salt Lake City
 Nyman, Juanita ho-V. Logan
 Nyman, Kenneth a-F. No. Logan
 Olsen, Edna S. ho-J. Logan
 Olsen, Nolan P. as-S. Logan
 Olsen, Owen J. e-J. Logan
 Olsen, Violet ed-So. Logan
 Olsen, Walter K. a-F. Salina
 Olson, Ingrid I. c-F. River Heights
 Olson, LeGrand G. e-F. Logan
 Olson, Ruth ho-So. Logan
 Openshaw, S. Reed c-F. Kaysville
 Orme, Clark e-F. Honeyville
 Orme, Lillian ho-S. Tooele
 Orser, Ellen Alta ho-J. Roosevelt
 Ostler, Ned ed-F. Nephi
 Ottosen, Elden A. SS. Manti
 Ottosen, Wilford E. c-F. Spanish Fork
 Overfelt, Helen H. ed-F. Gunnison
 Owen, Ethel L. as-F. Preston, Ida.
 Owen, Evan W. as-F. Logan
 Owen, Fred B. c-F-SS. Logan
 Owen, J. Wallace as-S. Logan
 Owen, Sam V. e-V. Logan
 Owens, Gwen SS. Richfield
 Owens, Stephen L. SS. Yuma, Ariz.
 Pace, Leslie A. a-F. New Harmony
 Packer, Elmo J. c-F. Logan
 Packer, Lee P. c-J. Logan
 Packer, Lula SS. Fielding
 Paewai, Niki a-S-SS. Logan
 Palmer, E. Darrel SS. No. Logan
 Palmer, Evelyn A. ed-S. Ogden
 Papworth, Parley G. as-F. Logan
 Papworth, Noble G. as-F. Logan
 Park, Jean ed-So. Salt Lake City
 Parker, Harrison G. ed-J. Ogden
 Parker, Laura Lee as-F. Logan
 Parker, Raymond as-F. Springville
 Parker, William R. e-S-SS. Wellsville
 Parkinson, Ernest W. a-So. Wellsville
 Parkinson, Evelyn ed-So. Logan
 Parkinson, G. S. SS. Logan
 Parkinson, LaRue as-S. Logan
 Parkinson, Paul C. as-So. Logan
 Parkinson, Ruth C. ed-F. Logan
 Parmar, Charn as-J-SS. Hoshiavpore, India
 Parr, Frank SS. Am. Falls, Ida.
 Parsons, Lucretia SS. Newton
 Partington, William e-S. Logan
 Passey, Cleone L. ed-S-SS. Logan
 Patterson, J. Alex as-J-SS. Hooper
 Peacock, Bess R. SS. Los Angeles, Calif.
 Pearse, Charlotte ed-So. Brigham
 Pearse, Richard A. as-So. Brigham
 Pearse, Mary R. SS. Brigham
 Pearson, Margaret as-J. Brigham
 Peart, ArDella B. ed-So. Logan

Pearl, Ina ed-So.	Richmond	Qualle, Cora M. SS.	Logan
Pedersen, Edith Faye as-S.	Logan	Quayle, James W. Jr. a-G.	Logan
Pedersen, Jean ho-So.	Logan	Quayle, Mary E. SS.	Logan
Pedersen, Thelma c-So.	Logan	Quinney, Bernice ed-So.	Logan
Pedersen, Peter A. C. SS.	Logan	Ralph, Pearl L. ho-F.	Salt Lake City
Pedlar, Thelma SS.	Yerington, Nev.	Rampton, Leonard H. c-So.	Bountiful
Pendleton, Grant a-F.	Logan	Randall, Elmer R. as-F.	Ogden
Pendleton, John H. SS.	Heber	Randall, Kermit E. as-F.	Idaho Falls
Perks, Orson SS.	Hyde Park	Rasband, Mary SS.	Heber
Perkins, W. Wendell SS.	Smithfield	Rasmussen, Elva ed-F.	Bear River
Perry, Joseph D. SS.	Helper	Rawlins, Jean Y. ed-So.	Logan
Perucca, Emma as-S-SS.	Hooper	Ray, Nellie SS.	Chandler, Ariz.
Petersen, Francis M. a-F.	Newton	Reading, Harold E. a-J.	Logan
Petersen, Iven ed-So.	Newton	Reading, Wm. J. a-J.	Logan
Petersen, Leland W. a-S.	Hyrum	Redden, Irena SS.	Hoytsville
Petersen, Thornton W. c-F.	Hyrum	Redford, Grant H. as-F.	Logan
Peterson, Adrian D. e-So.	Richfield	Redford, Marion as-F.	Logan
Peterson, Almira SS.	Ogden	Redford, Vivian as-F.	Logan
Peterson, Bessie ed-So.	Smithfield	Reed, Joseph SS.	Benson, Ariz.
Peterson, Dean F. SS.	Delta	Reeder, Elaine ed-F.	Brigham
Peterson, Elsie as-G.	Logan	Reeder, Evelyn as-F.	Logan
Peterson, Golden O. a-F.	No. Logan	Reeder, Hope, ed-So.	Corinne
Peterson, Harold as-G.	Logan	Reeder, Wendell as-F.	Hyde Park
Peterson, Howard E. a-F.	Brigham	Rees, Merle as-F.	Croydon
Peterson, Darrel as-J.	Salina	Rees, Thomas M. SS.	Salt Lake City
Peterson, Lorenzo SS.	Scipio	Reese, Annice SS.	Logan
Peterson, Mirian SS.	Logan	Reese, Arvel C. e-F.	Smithfield
Peterson, Norma SS.	Ogden	Reese, Lorin F. as-F.	Logan
Peterson, Norma c-F.	Smithfield	Reese, Venace SS.	Brigham
Peterson, Ottis as-So.	Logan	Reeve, Fenton SS.	Provo
Peterson, Phillip T. as-F.	Magna	Reeve, Verna R. ed-F.	Ogden
Peterson, Ruth E. as-So-SS.	Logan	Reeves, Vincent ed-J.	Brigham
Peterson, Waldo J. a-So.	Brigham	Remund, Clive O. as-So.	Midway
PHELPS, Mary I. SS.	Montpelier, Ida.	Remund, Grace ho-F.	Midway
Phillips, Fred L. c-F.	Leadore, Ida.	Rencher, Jay G. e-J-SS.	Logan
Phillips, J. W. SS.	Am. Fork	Rex, Glen as-F.	Randolph
Phillips, Wendell c-S.	Kaysville	Rice, Vernon a-F.	Ten Sleep, Wyo.
Pickering, Margaret C. SS.	Salt Lake City	Rich, Lothaire R. c-So.	Logan
Picot, George F. as-F.	Logan	Rich, Naoma SS.	Paris, Ida.
Platt, Chas. A. SS.	Kansas, Kan.	Rich, Rolla M. a-So.	Garland
Plowman, Melba L. ed-So.	Smithfield	Richards, Cleopha ed-J.	Malad, Ida.
Polerecky, Emilia F. SS.	Oak Park, Ill.	Richards, Franklin D. e-So.	Logan
Pollard, G. O. SS.	Salt Lake City	Richards, Margaret I. a-F.	Logan
Pollard, Leonard H. a-F.	Emmett, Ida.	Richards, Pearl ho-F-SS.	Logan
Pond, Grace as-So.	Grace, Ida.	Richards, Ralph J. a-So.	Logan
Pond, Preston W. ed-J.	Logan	Richards, Smith e-So.	Fielding
Porter, Constance ho-J.	Ashton, Ida.	Richards, Wilford W. SS.	Garland
Porter, Mary M. SS.	Morgan	Richardson, Florence S. SS.	Cokeville
Porter, Thos. H. SS.	Cedar city	Richardson, L. A. SS.	Cokeville
Porter, Wilford D. c-G-SS.	Hyrum	Richardson, Rufus D. SS.	Provo
Poulson, Joseph G. a-F.	Richfield	Richins, Dallas ed-So.	Echo
Powelson, Edith ed-So.	Brigham	Richins, Fay Edwin c-So.	Coalville
Power, Zona ed-So.	Ogden	Richmond, Hamilton ed-So.	Logan
Pratt, Claud H. c-F.	Hinckley	Ricks, Edna as-S-SS.	Logan
Pratt, Harold O. ed-F.	Preston	Ricks, Erma Lynette as-J.	Sugar City, Ida.
Prestwich, Berg as-So.	Moroni	Ridd, Mabel A. SS.	Brigham
Price, Beatrice C. SS.	Paris, Ida.	Rigby, Gwendolyn ed-J.	Newton
Price, Lessie W. SS.	Paris, Ida.	Rigby, Hazel SS.	Newton
Price, Wilford SS.	Paris, Ida.	Rigby, Lucile as-F.	Newton
Pugmire, K. Ross SS.	Garden City	Rigby, Murland as-S.	Newton
Pugmire, Ralph as-So.	Ogden	Rinderknecht, Norma c-F.	Providence
Pugsley, Edna ed-F.	Rosette	Rinderknecht, Oliver J. a-F.	Providence
Pulley, Hamlet C. as-G.	Logan	Rindlisbacher, Fred e-V.	Logan
Pulsipher, J. Will SS.	St. George	Rippling, Lawrence A. ed-J-SS.	Driggs, Ida.
Pulsipher, Wells a-F.	Avon	Rippon, Charles S. e-So.	Coalville
Pyper, LaVon SS.	Heber	Ririe, Lettie as-S.	Ogden
Qually, Mrs. Doris C. SS.	Christina, Mont.	Ririe, Walter F. a-So-SS.	Lewiston

Ritchie, G. Wendel c-G	Logan	Seeley, Hyrum W. c-F	Vernal
Ritchie, Gordon B. e-F	Logan	Seeley, Leola ed-So	Brigham
Roaf, James a-So	Rolapp	Servoss, Arthur a-F	Ogden
Robb, Wayne a-So	Logan	Sessions, Milton C. a-F	Farmington
Robbins, Helen M. as-V	Logan	Shaffer, Newell a-F	Vernal
Robbins, Irven e-V	Logan	Sharp, Klemmer F. SS	Salt Lake City
Robbins, Raymond ed-So	Logan	Shaw, Byron T. as-J	Logan
Roberts, David F. as-F	Logan	Shaw, Constance M. ho-S	Ogden
Roberts, Lyman SS	Heyburn, Ida.	Sheffield, Carl N. c-J	Salt Lake City
Roberts, Myrle L. c-So	Brigham	Sheffield, Erwin L. as-F	Kaysville
Robertson, Mont a-F	Fountain Green	Shelton, Joseph Wm. a-F	Lehi
Robertson, Von H. as-So	Alton	Shepard, Louise as-S	Logan
Robbins, Mary E. SS	Brigham	Shields, E. Reed as-F	Tooele
Robinson, Elizabeth ho-G	Salt Lake City	Shields, Kenneth c-So	Tooele
Robinson, Frank ed-So	Coalville	Shipley, Fern ho-F	Logan
Robinson, L. Ray as-G-SS	Logan	Shipley, Merlin c-J	Franklin, Ida.
Robinson, Merla ed-So	Coalville	Shoemaker, Morris B. SS	N. Brunswick, N. J.
Robinson, Sarah SS	Laketown	Shoenfelt, Cecil E. SS	Denver Colo.
Rogers, Harry SS	Salt Lake City	Shrives, Thelma ed-So	Logan
Rogers, LuDean ed-S-SS	Lewiston	Shumway, Nettie ed-F	Treasureton, Ida.
Rogers, Noah e-S	Pillmore	Shumway, Richard F. SS	Trenton
Rogers, Roma c-V	Lewiston	Shurtliff, Keith I. a-So	Ogden
Roland, August H. c-F	Salt Lake City	Sill, Marguerite c-F	Layton
Roland, Lewis E. a-G	Salt Lake City	Simonsen, Elva ho-So	Brigham
Rollins, C. Wallace a-So	Greenville	Simpson, Ardele ho-J	Logan
Rolph, John J. a-F	Newton	Simpson, Sara SS	Heber
Rose, Cleone as-J	Logan	Sims, Mitchell e-F	Garden City
Rose, Loretta ed-F	Tremonton	Singleton, Faun ho-J	Ferron
Rosenbaum, David H. as-F	Brigham	Sisco, Ray a-So	Logan
Rosengreen, Geo. E. as-G	Logan	Skanchy, Antone as-S	Logan
Roskelly, Thelma ed-F	Smithfield	Skanchy, Sierid as-S-SS	Logan
Rowberry, Elma L. as-F	Logan	Skidmore, Kathryn as-J	Logan
Rowberry, Valene H. as-J	Logan	Smart, Arba M. as-So	Logan
Rowe, Gus F. c-S	Logan	Smart, Lowell G. ed-F	Logan
Rowland, Louise ed-F	Richmond	Smart, Margaret ho-F	Logan
Roy, Chalmers SS	Wentworth, Mo.	Smart, Theron as-S-SS	Union
Rust, Alice ed-So	Logan	Smedley, D-ibert W. as-So	Bountiful
Salmon, Nelson S. as-S	Logan	Smith, Arthur L. SS	Eureka
Sandau, Richard ed-F	Blackfoot, Ida.	Smith, Carlos c-F	Salt Lake City
Sanders, Stewart a-F	Midvale	Smith, Charles E. c-F	Salt Lake City
Sant, Mabel ho-F	Clifton, Ida	Smith, Clarissa ho-F	Logan
Sant, Sadie ed-F	Clifton, Ida.	Smith, Clifton H. as-G	Hooper
Santistevan, Bailey J. SS	Bingham	Smith, David L. as-F	Sugar City, Ida.
Saunders, Wm. H. SS	Greeley, Colo.	Smith, Dewitt C. as-J	Pleasant Grove
Saxer, Alton H. as-S-SS	Logan	Smith, Edna as-F	Logan
Schaer, Wilma SS	Ogden	Smith, Geo. L. c-V	Richmond
Schank, L. C. SS	Bunkerville, Nev.	Smith, Helen J. ho-So	Pleasant Grove
Schank, Verona C. SS	Bunkerville, Nev.	Smith, Ione A. c-F	Logan
Schaub, Geneva ed-J	Logan	Smith, Ivan D. c-F	Salt Lake City
Schaub, Vesta SS	Logan	Smith, Ivy L. ho-S	Logan
Schenk, Erma ed-F	Logan	Smith, J. Holmes as-So	Logan
Schiess, Connie ed-F	Providence	Smith, J. Rennell e-S	Logan
Schirmeister, Aaron e-V	Logan	Smith, James S. c-S	Logan
Schmidt, Frank B. a-F	Sandy	Smith, John P. Jr. as-F	Logan
Schmidt, Leonora C. ed-So	Providence	Smith, Josephine ed-F	Logan
Scholes, Abbie SS	Logan	Smith, Kate as-So	Logan
Scholes, Jos. Fred a-F	Logan	Smith, Lena P. SS	Hyrum
Scholes, Wallace Burnham as-S	Logan	Smith, Lloyd H. e-F	Uron, Ida.
Schow, Iris ed-So	Mantua	Smith, Merlin Wm. c-So	Logan
Schoffner, Wm. L. e-So	Salt Lake City	Smith, M. W. SS	Hyrum
Scoffield, Golden F. a-F	Kaysville	Smith, Newel R. c-So	Logan
Scorup, Stena SS	Salina	Smith, Norman as-F	Smithfield
Scott, IdaVie SS	Logan	Smith, Oliver F. a-J	Providence
Scott, James D. c-So	Logan	Smith, Ralph C. e-F	Pleasant Grove
Scoville, Therna C. as-S	Ordan	Smith, Retta SS	Pleasant Grove
Seamons, G. Vernal c-S	Hyde Park	Smith, Ronald as-S	Logan
Seamons, Harold Shaffer as-F	Preston, Ida.	Smith, Ruth as-So	Logan
Seaton, Alva L. e-F	Jackson, Wyo.	Smith, Wm. as-S	Logan

Snow, J. H. SS.	Logan	Swinyard, W. O. SS	Logan
Snow, M. Helen ed-So.	Logan	Syme, Evelyn as-F.	Rock Springs, Wyo
Sorensen, Edna SS.	Logan	Taggart, Beulah ho-F.	Lewistown
Sorensen, Fred C. as-S.	Logan	Taggart, Marjorie as-F.	Cody, Wyo
Sorensen, LaVell as-S-SS.	Smithfield	Taggart, Moletta ed-F.	Lewistown
Sorensen, Mary E. SS.	Logan	Tanner, Elden S. as-F.	Logan
Sorensen, Ruby as-F.	Smithfield	Tanner, Howard D. c-J.	Milford
Sorensen, Sadie May ed-So.	Cornish	Tanner, Mathias C. SS.	Ogden
Sorensen, Stella as-F-SS.	Smithfield	Tarbet, Barbara c-F.	Logan
Sorensen, Uarda ed-So.	Mantua	Tasso, Eleonora J. ho-So.	Logan
Sorensen, Wesley A. c-S.	Logan	Tate, R. Sharon c-So.	Tooele
South, Agnes ed-F.	Logan	Taylor, Edna SS.	Willard
Sowards, Hazel M. ho-F.	Vernal	Taylor, Glenn SS.	Willard
Spackman, Asa C. ed-S.	Richmond	Taylor, Milton as-So.	Logan
Spalding, Curtis J. a-S.	Logan	Taylor, Neldon A. ed-J.	Payson
Spencer, Jean SS.	Houston, Texas	Taylor, Owen A. a-J.	Blackfoot
Spencer, LeGrande as-F.	Logan	Taylor, Truth as-S.	Willard
Spencer, Roy N. e-F.	Aurora	Thain, Afton as-So.	Logan
Sperry, Florence SS.	Salt Lake City	Thatcher, Darlesky M. as-F.	Thatcher, Ida
Sperry, Mildred M. ed-So.	Nephi	Thatcher, Moses Jr. as-So.	Logan
Spidell, Claire ed-J.	Logan	Theurer, Melba as-J.	Providence
Spillman, F. L. as-F.	Logan	Thomas, Alvin Jr. SS.	Logan
Stallings, Chester C. e-F.	Ogden	Thomas, David W. SS.	Malad, Ida.
Stander, Jess M. e-V.	Blackfoot, Ida.	Thomas, Eleanor SS.	Swan Lake, Ida.
Standing, Arnold R. a-S.	Ogden	Thomas, Elizabeth SS.	Ogden
Stanrod, Ada SS.	Logan	Thomas, Joseph M. as-So.	Logan
Stanger, Glenn S. c-S.	Logan	Thomas, Lloyd B. SS.	Columbia, Mo.
Stanger, Keith W. c-So.	Logan	Thompson, Fontella c-So.	Richmond
Stark, Arvil L. a-S.	Salt Lake City	Thompson, H. Tracy SS.	Tetonia, Ida.
Stark, John D. e-F.	Salt Lake City	Thompson, James, A. as-So.	Garland
Starr, Anna SS.	Springville	Thompson, Odell as-F.	Garland
Starr, Courtland P. a-So.	Springville	Thorpe, Paul as-So.	Providence
Starr, Nora as-J.	Springville	Thurman, Lovina SS.	Grover, Wyo.
Starr, Pearl SS.	Springville	Tebbs, Hazel ho-J.	Panguitch
States, Marica ed-J-SS.	Logan	Tingey, Alveda ed-F.	Logan
Stekol, Sam A. a-F.	Tientsin, China	Tingey, Delar c-So.	Logan
Stephens, Leland G. a-F.	Ogden	Tingey, Vance H. ed-G-SS.	Logan
Stephens, Melvin J. a-J.	Logan	Tippets, Hugh SS.	Logan
Stevens, Alta E. SS.	Salt Lake City	Tippets, Reed M. c-V.	Cowley, Wyo.
Stevens, D. Garn a-J.	Trenton	Tippets, Ruth ho-F.	Cowley, Wyo.
Stevens, Justus M. SS.	Tooele	Todd, Dean M. a-F.	Heber
Stevens, Margaret E. as-So.	Ogden	Toland, Carrie SS.	Logan
Stewart, Gracia ed-F.	Logan	Tolman, Loa J. SS.	Murtaugh, Ida.
Stewart, King c-J.	Logan	Tolman, Nathan G. SS.	Oakland, Calif.
Stewart, Lester c-F.	Salt Lake City	Torgeson, George F. as-F.	Logan
Stibal, John S. a-S.	Ogden	Towers, Helen L. ho-So.	Eureka
Stirland, LaGrande L. a-G.	Providence	Tremelling, Edwin S. s-So.	Garden City
Stirland, Verda L. ed-So.	Providence	Trowbridge, Raymond SS.	Columbia, Mo.
Stock, Merlin R. a-So.	Logan	Tuddenham, Evelyn ho-S.	Newton
Stoddard, Fred G. c-S.	Logan	Turley, E. C. SS.	Ephraim
Stoker, Bertha SS.	Clearfield	Tuttle, J. Burton c-F.	Glenwood Spgs. Colo.
Stoker, Golden L. a-F.	Clearfield	Tyson, Virginia c-So.	Logan
Stokes, Howard, Alfred as-F.	Brigham	Underwood, James T. c-S.	Kaysville
Stone, P. B. SS.	Murray	Valentine, DeLone E. as-J.	Brigham
Stone, Royal B. SS.	Murray	Vanderhoof, Kenneth J. ed-J.	Ogden
Stout, Beulah SS.	Logan	Vargas, Aniceto T. c-J.	Logan
Stout, Eunice ed-F.	Logan	Vernon, D. Marjorie SS.	Logan
Stratton, Ervin a-F.	Hinckley	Vernon, Frances I. ho-J-SS.	Logan
Stringham, Martha ho-J-SS.	Bountiful	Vernon, LaVon e-F.	Vernal
Stucki, E. S. SS.	Rexburg, Ida.	Verslius, Harry a-V.	Salt Lake City
Stuart, Melba ho-S.	Wellsville	Vickers, Maurine L. as-J.	Nephi
Stuart, Wm. W. a-G.	Wellsville	Wade, Ellis ed-S-SS.	Pleasant View
Sutton, James B. e-V.	Logan	Wadley, Reef a-S.	Pleasant Grove
Suzuki, Tatsumi a-So.	Logan	Wadsworth, Charles D. a-F.	Logan
Sweeten, Orpha c-S.	Garland	Wadsworth, Harold SS.	Logan
Swendsen, Howard J. e-So.	Logan	Wadsworth, James D. e-F.	Logan
Swinyard, Chester A. as-G.	Logan	Wahlstrom, Edna as-F.	Laketown
Swinyard, Ewart A. as-So.	Logan	Wahlstrom, Lola SS.	Laketown

Waldram, Eula SS	Sugar City, Ida.	Williams, Beatrice as-F	Logan
Waldron, Nello B. c-S	Tremonton	Williams, Catherine M. ed-So	Logan
Walker, Calvin c-S	Pleasant Grove	Williams, David E. SS	Price
Walker, Clive S. a-So	Murray	Williams, Dora ho-F	Cove
Walter, H. Glen SS	Logan	Williams, Edgar L. SS	San Francisco
Walker, Leo R. SS	Garland	Williams, Howard W. as-S	Kaysville
Walker, Thomas, A. a-So	Pleasant Grove	Williams, Jack SS	Malad, Ida.
Walker, Rulon A. as-J	Logan	Williams, Leo ed-So	Logan
Walker, Verna SS	Layton	Williamson, Cornelia SS	Reno, Nev.
Walker, Wendell H. as-So	Salt Lake City	Williamson, David O. as-So	Pleasant Grove
Wall, Ernest V. e-F	Venice	Williamson, Theresa G. SS	Pasadena, Calif.
Wall, Oleah SS	Mt. Pleasant	Wilson, Edna as-J	Logan
Wallace, Arthur SS	Washington, Mo.	Wilson, Elda ho-F	Logan
Wallace, Bruce G. as-S	Logan	Wilson, Harriet c-S	Fallon, Nev.
Wallace, Cloyd SS	Joplin, Mo.	Wilson, LeMoynes a-G	Logan
Wallace, Nora SS	Driggs, Ida.	Wilson, Verla c-So	River Heights
Walter, Henry G. as-G	Holladay	Windsor, Lillian SS	Pocatello, Ida.
Walters, Aileen M. ed-F	Wellsville	Winkel, Anton G. a-V	Richfield
Ward, Edward D. a-J	Willard	Winkler, Aurel P. a-J	Mt. Pleasant
Ward, M. e-V	Logan	Winn, Blanche ed-F	Smithfield
Ward, Newell T. e-F	Washakie	Winn, D. Sheldon ed-S	Nephi
Ward, Orville M. e-V	Logan	Winn, Glen R. as-S	Smithfield
Ward, Owen as-S	Willard	Winn, Lloyd SS	Hyrum
Ward, Reuben A. a-So	Brigham	Winters, N. Blaine SS	Garland
Ward Vera ho-So	Logan	Winters, Rhea J. SS	Garland
Ward, Verda L. ed-So	Bloomington, Ida.	Wintle, Arnold V. a-J	Honeyville
Wardleigh, Virginia SS	Ordan	Wise, Ruth ed-F	Logan
Warren, Rex a-So	Price	Wixom, Calvin a-S	Logan
Washburn, Felicia M. as-V	Venice	Woffinden, Arthur J. e-F	Salt Lake City
Washburn, Newel a-So	Venice	Wolfley, Esther L. SS	Etna, Wyo.
Watkins, DeLos a-F	Vernal	Wood, Gordon c-S	Nephi
Watkins, Dorothy ho-S	Logan	Wood, Ray H. a-J	Logan
Watkins, Lorenzo C. as-F	Ogden	Woodhouse, Trafford V. a-F	Logan
Weatherston, Bertha SS	Plain City	Woodside, Howard SS	Exeter, Calif.
Webb, Charles M. a-F	Hinckley	Woodward, Blanche ed-F	Logan
Webb, Clarice as-So	Richmond	Woodward, Rollo SS	Franklin, Ida.
Webb, Delmar H. as-J	Richmond	Worley, Erma SS	Logan
Webb, Florence M. ho-S	Richmond	Worley, Max E. as-F	Salt Lake City
Webb, Marjorie J. ed-So	Lehi	Worthington, T. Glen ed-S	Nephi
Webb, O. Sherwin as-So	Richmond	Wright, Adrian W. e-F	Blackfoot, Ida.
Webster, Daisy A. as-S	Logan	Wright, Chester a-J	Hinckley
Weeks, Lawrence G. as-So	Smithfield	Wright, Don e-F	Salina
Welch, Golden M. ed-J	Logan	Wright, Edna SS	Logan
Wells, Helen SS	Logan	Wright, Gerald G. c-F	Logan
Wennergren, Hazel ed-So	Logan	Wright, Lucille ho-So	Hyrum
West, Anna, ho-J	Afton, Wyo.	Wursten, Aldena SS	Logan
West, Marjorie c-So	Logan	Wursten, Leah M. ed-So	Logan
West, Roy SS	Logan	Wursten, Luther a-F	Logan
Westenskow, Elden a-J	Manti	Wurst, Virgil P. e-V	Logan
Weston, Milton B. as-F	Laketown	Wyatt, Elsie ho-S	Wellsville
Weston, Norma SS	Laketown	Wynstra, S. S. SS	Burlington, Wash.
Weston, Ramona as-So	Laketown	Wynstra, W. S. SS	Cheney, Wash.
Westover, Arus J. as-F	Logan	Yates, LaRue as-F	Brigham
Whitcott, Clemouth SS	Corinne	Yates, Thomas H. e-F	Brigham
Wheeler, Thora as-So	Lewiston	Yates, Willard M. a-So	Brigham
White, June H. as-F	Paradise	Yeates, Alexander e-So	Logan
Whitehead, Dean R. a-F	Logan	Yeates, Charles B. a-So	Logan
Whitehouse, Franklin c-F	Tooele	Yeates, Myrtle, V. as-So	Logan
Whiteley, Verna O. SS	Ogden	Yoshida, Frank as-So	Garland
Whitesides, Ima B. ed-F	Layton	Young, Helen ho-F	Logan
Whiting, Heber SS	Smithfield	Young, Ivan W. SS	Ephraim
Whitlock, Kenneth a-So	Mayfield	Young, John A. SS	Cedar
Whittle, Horace Y. as-S	Logan	Zager, Anna as-V	Hayden
Whittle, Tille, as-S	Logan	Zager, Frances ed-V	Hayden
Wilkenson, Sarah L. as-F	Logan	ZoBell, Claude E. as-G	Logan
Wilkins, Delmer W. as-F	Hinckley	ZoBell, Ira Deloss a-G	Price
Willes, Belle O. ed-So	Lehi	Zollinger, Ora as-F	Providence

SUMMARY OF ATTENDANCE—1928-29

Rank	Agricul.		Arts & S		Com'ce		Educa'tion		Eng'er		H. Ec		Totals
	M.	W.	M.	W.	M.	W.	M.	W.	M	W	M	W	
Graduates....	15		16	4	10	1	2		3		4		55
Seniors.....	28		37	31	27	2	6	3	13		38		185
Juniors.....	37		36	33	25	6	5	7	13		29		191
Sophomores	46		49	35	29	19	14	83	28		19		322
Freshmen ...	105	2	97	58	43	24	12	65	56		28		490
Total													
Collegiate.....	231	2	235	161	134	52	39	158	113		118		1243
Vocational....	7		5	4	4	2		2	26		1		51
TOTALS.....	238	2	240	165	138	54	39	160	139		119		1294

Summer Quarter 1928—

Men.....	249												
Women.....	251								500				
Less Names Repeated:													
Men.....	37												
Women.....	43								80				420
Net Total Resident Enrollment.....													1714

Correspondence Department Enrollment:

Men.....	206												
Women.....	209								415				
Extension Classes:													
Men.....	78												
Women.....	88								166		581		
Less Names Repeated:													
Men.....	71												
Women.....	88										159		
Total, Less Names Repeated:													422

ENCAMPMENT AND SHORT COURSES

*Farmers' Encampment—Men.....	869												
Women.....	1013												1882
Club Leaders' Training School—Boys.....	25												
Girls.....	58												83
Scoutmasters' School—Men.....													80
Adult Leaders' Training School—Women.....													50

Total Registration at Encampment and Short Courses.....2095

*In addition there were 1532 children.

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